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THE DD/S&T HISTORICAL SERIES

DD/S&T-1

THE DIRECTORATE FOR SCIENCE AND TECHNOLOGY  
1962-1970

VOLUME ONE CHAPTERS I-IV

*by*

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June 1972

NRO review(s)  
completed.

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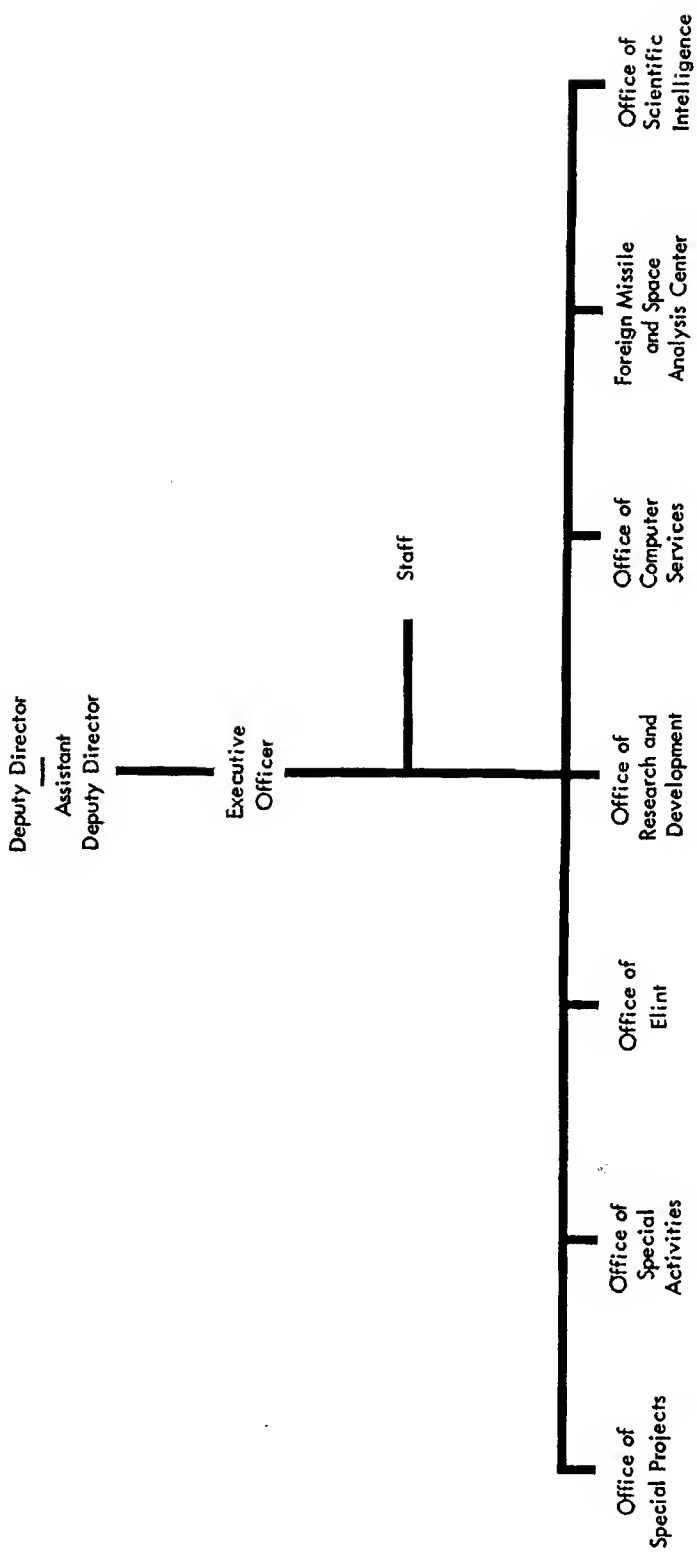
Carl E. Duckett  
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# Directorate of Science and Technology



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I. Establishment of the Directorate for Research,  
February 1962

A. Background

Early U.S. efforts in the collection and analysis of scientific intelligence were principally motivated by known, or suspected, advances in technology by hostile powers, such as the "secret weapons" of Germany during World War II, and later the nuclear energy and missile developments of the Soviet Union and Red China. There was no centralized U.S. organization for these efforts until after World War II. The first such entity to be established in the wake of the demobilization of wartime agencies in the fall of 1945 was a small "Scientific Branch" which was set up in the Central Intelligence Group (CIG)\* at the request of the Joint Research and Development Board (JRDB)\*\* to satisfy the Board's scientific intelligence requirements. When the National Security Act of 1947 established the Central Intelligence Agency to replace the CIG, the JRDB continued

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\*The National Intelligence Authority, established by President Truman on 22 January 1946, included an interim Central Intelligence Group, set up to consolidate all U.S. intelligence efforts related to national security.

\*\*The Joint Research and Development Board, under the Chairmanship of Dr. Vannevar Bush, replaced the wartime Office of Scientific Research and Development. It was created by charter of the Secretaries of War and Navy on 6 June 1946 to coordinate R&D activities of interest to their departments.

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to place its requirements on the Scientific Branch, even though the unit was understaffed and not able to fulfill all the Board's needs. 1/

In 1948, two high-level investigating bodies looked into the U.S. intelligence organization: the Task Force on National Security Organization of the Hoover Commission heard testimony from the JRDB on the inadequacy of scientific intelligence and recommended greater efforts in that area; and the National Security Council's Intelligence Survey Group, chaired by Mr. Allen Dulles, looked into the same area and recommended the centralization of scientific intelligence activities and the strengthening of the Scientific Branch of CIA. As a result of pressure generated by these investigations, the Scientific Branch was enlarged and strengthened through consolidation of scientific activities and was elevated to a higher organizational level within the Agency as the Office of Scientific Intelligence (OSI), effective 1 January 1949. During its early years, OSI spent much time in contention with the military and with other CIA offices in an effort to establish its areas of responsibility. An unsuccessful effort was made to include a role for OSI in collection, as well as analysis, of scientific intelligence. Little progress was made by OSI, except in

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Elint and nuclear energy intelligence, until after 1955 when a reorganization under new leadership took place, and the U-2 photographic collection began to pay off with an attendant improvement in OSI's capabilities. 2/

The Soviet Union, meanwhile, had continued to build up its war-making potential in great haste and utmost secrecy behind the Iron Curtain. In August 1953 the announcement that the Soviet Union had exploded a hydrogen device demonstrated its capability to begin the production of multi-megaton weapons. By 1957 further Soviet technological advances included the firing of an ICBM and the launching of Sputniks I and II into orbit. CIA responded by augmenting its technical collection programs as conventional collections diminished.

During this period the influence of high-level scientific advisory groups on the U.S. intelligence process continued to be felt. In October 1954 the Office of Defense Mobilization set up a Technical Capabilities Panel (known as the "Surprise Attack Committee") under the chairmanship of Dr. James R. Killian, President of M.I.T., to study more effective ways of mobilizing scientific resources in the event of an emergency. A sub-panel of the group, headed by Dr. Edwin H. Land, President of Polaroid, was the motivating force behind the joint CIA/Air Force

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initiation of the U-2 project late in 1954. Drs. Land and Killian, and other scientific advisers at the White House level, were also instrumental in promoting CIA's participation, with the Air Force, in a photo-reconnaissance satellite program beginning in 1958.

In the late 1950's, despite the advances in technical collection programs, such as Elint and photographic reconnaissance, the U.S. Government lacked an effective central mechanism for coordinating the conduct of all scientific and technical intelligence operations, both in collection and production, and in the systematic development and application of new scientific and technical methods. CIA suffered internally from the same lack of centralized coordination of the various activities concerned with collection and analysis of scientific intelligence which had developed within the three separate directorates of the Agency. A proposal was made to CIA Director Allen Dulles in 1957 that all of CIA's scientific and technical activities be combined under a new directorate in order to ensure that the role of science in intelligence operations would receive the emphasis and priority which the current world situation demanded. 3/ Mr. Dulles was better known as a devotee of classical methods of espionage than for his interest in the increasing role of 25X1

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technology in intelligence, despite the fact that he had backed CIA participation in the U-2 program and in the first satellite reconnaissance program. (Those activities, as previously noted, had been pressed upon CIA by high-level scientific advisers.) The recommendation for a scientific directorate was also referred to Mr. Richard M. Bissell, Jr., who as Project Director for the U-2 was then completely involved in maintaining high-level political acquiescence in continuation of that program under CIA management (as opposed to Air Force take-over), and in protecting the U-2's primary mission of photography against the encroachment of the Elint people and others who wanted to make use of the U-2 capability for other purposes. Mr. Bissell preferred to keep his operation as small and tightly controlled as possible, using the minimum of staff at Headquarters Washington for direction and support, and preserving the "special project" status of the U-2 program. Thus, the idea of a large scientific directorate had small chance for internal CIA consideration in 1957. Even in 1961, when it was put forward by the new DCI as a concrete proposal, there was opposition from many quarters.

It was inevitable, however, with the advances in science and technology which were taking place on both

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sides of the Iron Curtain, and the continuing confrontation between East and West, that there would be changes in CIA's organization to meet the changing world situation.

B. Mr. McCone Establishes the Directorate for Research

On 27 September 1961, President Kennedy named Mr. John A. McCone to succeed Mr. Dulles as DCI, effective upon the latter's retirement as of 29 November 1961. Mr. McCone had a broad background of experience in engineering and had served as Director of the Atomic Energy Commission under the Eisenhower Administration. The new DCI, on taking office, immediately set in motion a review of the organizational structure and activities of CIA. The CIA Inspector General, then Mr. Lyman B. Kirkpatrick, was named Chairman of the Working Group on Organization; the other two members were [redacted] then Secretary of the President's Foreign Intelligence Advisory Board (PFIAB), and General Cortlandt V. R. Schuyler, U.S. Army, Retired, an adviser on the staff of Governor Nelson Rockefeller.

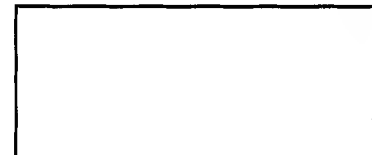
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One of the major concerns of the group was the proposal for the establishment of a new Directorate for Research, supported by Mr. McCone and by Dr. Herbert Scoville, Jr., then Assistant Director of Scientific

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Intelligence. The purpose in setting up the new research directorate, according to Mr. McCone's original concept, was

...to pull scientific and technical talents of the Agency together in one office headed by the Deputy Director (Research) and thus provide more complete intelligence and cross-fertilization of our scientific talents on the one hand, and on the other hand, create a sufficiently large "magnet" to attract and offer an opportunity and a career to new, highly-trained technical personnel. 4/

Mr. Bissell, who was then Deputy Director for Plans but who was shortly to leave that post, gave a negative response to the proposal for the new Directorate for Research. He said he believed it infeasible, as well as bad organization, to transfer responsibility for Elint and Comint collection activities out of the Clandestine Services (CS)

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He was opposed to removing the Technical Services Division (TSD) from the CS because there must be closely unified control between development of equipment and its operational use by the CS. Lastly, he believed it was unwise to place the Assistant Director for Scientific Intelligence (AD/SI) under any superior officer other than the Deputy Director for Intelligence. Mr. Bissell agreed, after making the above exclusions, that the new Deputy

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Director should have the responsibility for advanced reconnaissance projects, perhaps the Photo Interpretation Center, and some of the larger Elint and Comint collection enterprises. However, it was not clear to him why a Deputy Director was required since he felt that a senior officer attached to the Director as an assistant for special projects could handle the advanced reconnaissance projects with the help of a small staff (in a set-up similar to that occupied by Mr. Bissell during the U-2 development). 5/

Despite this negative reaction, and before the Kirkpatrick [ ] Schuyler report was written, Mr. McCone informed the PFIAB on 22 January 1962 that he intended to create a new deputy director for technical collection under whom all of CIA's scientific activities would be brought together. Dr. Killian, then Chairman of PFIAB, at the same meeting had encouraged the DCI to maintain a scientific approach to new problems of collection, and not to allow the quality of imagination in CIA to be diminished. On 14 February 1962, Mr. McCone gave advance notice of the formation of the new directorate [ ]

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[ ] which announced the resignation of

\*Appendix A, Tab 1.

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Mr. Bissell and the appointment of Mr. Richard Helms to the position of DD/P. An additional paragraph read

The organization of the DD/P is currently being studied and certain changes are contemplated. There will be created a Deputy Director for Research and Development and certain of the Research and Development functions now administered by the Deputy Director (Plans) will be transferred to that Deputy. 6/

Mr. McCone offered the new Deputy Directorship to Dr. Scoville, who accepted and immediately set to work drafting a proposal on the make-up of the new directorate. On 16 February, [redacted] an- 25X1 nouncing the establishment, effective 19 February 1962, of the Office of the DD/R and the assignment of Dr. Scoville, who was to continue to act as AD/SI during the transition period. 7/ Also on 16 February, Mr. McCone asked for a proposal designating the elements of the Development Projects Division (DPD), heir to the U-2 project, which should be transferred to DD/R and those to remain in DD/P. Between 17 and 28 February, Mr. Bissell, serving in the capacity of Acting Chief of DPD, carried out the DCI's request, reaching certain general conclusions regarding the reorganization of DPD and the establishment of the DD/R.\*\*

[redacted]  
\*\*See "DD/R Components, OSA," pp. 19-24, below.

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1. DD/R Organization: Activities to be Included

Dr. Scoville's draft proposal on the organization of the DD/R recommended inclusion of three general types of scientific and technical activities: (a) research and development on technical collection and data reduction systems; (b) production of intelligence on scientific and technical capabilities of other countries; and (c) conduct of all operations using technical collection methods and of scientific and technical operations using classical agent techniques.

Specific Agency activities recommended for inclusion were: (a) the special projects component of DPD; (b) the research and development and laboratory testing component of TSD; (c) the DD/I's Office of Scientific Intelligence (OSI), including all Elint activities; (d) the Elint activities of the Office of Communications (O/C), and its research and development in Comint and agent communications; and (e) a new Career Service under the chairmanship of the DD/R to encompass scientific and technical personnel Agency-wide. 8/

Mr. Helms, then DD/P, after giving careful consideration to the advantages and disadvantages of separating the research and development function from TSD,

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in consultation with senior CS officers, recommended

that research and development activities of TSD which are performed in close support of Clandestine Services activities remain within the Clandestine Services, and that the research and development effort which is directed toward the development of systems and equipment which do not directly support Clandestine Services activities be transferred out of TSD to the Office of the DD/R. 9/

Mr. Robert Amory, Jr., then DD/I, after considering Dr. Scoville's draft, informed the DCI on 19 March 1962 that it would be undesirable and against the best interests of the Agency to move OSI from the DD/I to the DD/R for the following reasons:

a. The DD/R was being established to give two arms to the Agency's collection effort: the classical and the scientific (experience having shown that both tasks were too big for one administrator). He felt the direction of all advanced methods of intelligence data collection was a demanding task and would fully occupy the DD/R staff. The fact that more than one-third of the Agency's budget was involved in these projects, Mr. Amory felt, supported this view.

b. The assessment of a country's capabilities and possible courses of action must include scientific and technical factors along with military, economic,

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and political ones. Fusion of discipline rather than separate compartmentation was necessary to balanced, rounded intelligence, and integration must take place at all levels of analysis and production for all finished studies, estimates, and current intelligence publications.

c. Mr. Amory was opposed to lumping research and development people in with intelligence-producing scientists in the same career designation since the latter were first and foremost intelligence officers utilizing their scientific background to assist them in a process of reasoning no different from that engaged in by political scientists or economists.

d. The Director of OSI would be in a better position to represent the Agency in questions of scientific intelligence on foreign countries' capabilities if he were not under the shadow of a senior Agency official engaged in developing and promoting particular collection systems.

e. Lastly, Mr. Amory cited the supporting views of the Kirkpatrick working group, and of the DD/I officers responsible for National Surveys and Estimates, and for Current Intelligence, all of whom agreed with him that OSI should remain where it was. 10/

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2. Kirkpatrick  Schuyler Recommendations

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The final report of the Working Group on Organization, issued on 6 April 1962, was in some measure overtaken by events with regard to the section on the organization of the DD/R, and stated

The Office of the Deputy Director (Research) having already been created, we now make the following recommendations as to those units which should be included under this Deputy... 11/

Units listed were the special projects staff of DPD, including necessary support elements, all Elint activities, all TSD research and development, National Photo Interpretation Center (NPIC) research and development, and certain research and development of the Office of Communications. As for OSI, although it was well understood that the DCI wished it to go over to the DD/R, the report recommended against this. Finally, calling attention to the DCI's intention to have the DD/R carry out the operational phase of certain major projects, the report underlined the likelihood that DD/R's prospective key people (scientists and technical experts) would have no professional intelligence operations experience and little background or interest in detailed operational problems, particularly security. It was suggested, therefore, that as a general rule—granted that there would be exceptions—when operations began, responsibility

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for operations should be with the DD/P, but that the DD/R should retain responsibility for seeing that the equipment he had developed continued to function properly. 12/ This suggestion was strongly opposed by Mr. Bissell during the February 1962 discussions, particularly with regard to the projects being transferred to the DD/R from the DPD.\*

Indications at that point were against the achievement of the goal set by the DCI of gathering all scientific and technical activities under the DD/R. Mr. Kirkpatrick, who was appointed to the newly-created post of Executive Director on 10 April 1962, collaborated with Dr. Scoville in trying to pull together, during April and May 1962, all agreed elements of the DD/R and draft a Headquarters Notice setting forth the DD/R's terms of reference. They were unable to reach agreement on the draft.

The Executive Director returned to Mr. McCone on 17 May 1962 with a recommendation that he accept less than his desired goal. Mr. Kirkpatrick told the DCI that, after extended discussions relative to the transfer of OSI with Dr. Ray S. Cline (who had succeeded Mr. Amory as DD/I on 23 April 1962), and with Dr. Scoville, it boiled down to the fact that Dr. Cline felt if he lost OSI he would simply

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\*See "DD/R Components, OSA," pages 19-21, below.

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have to create another OSI in order to do his job of intelligence production and estimates. The DD/R would like to have OSI not only in order to centralize scientific and technical efforts in one place but as a reservoir of talent. Dr. Scoville wanted to have all TSD research and development and felt that those items the DD/P was willing to release were "cats and dogs." Mr. Kirkpatrick said, after considerable study of the matter, that

it would appear to me preferable to allow the DD/R to grow by evolution and accretion rather than any drastic surgery on either DD/I or DD/P. I believe the DD/R has a tremendous responsibility and a burden in the two major projects for which he is now responsible. However, I believe that he should be given a high priority for borrowing or acquiring personnel, when needed, from either the DD/I or DD/P. Further, I think he should head and direct a scientific and technical career service for those individuals in the DD/I or DD/P who would prefer to belong to such a service rather than the DD/I or the DD/P career service. Finally, I would recommend that he be given authority to recruit personnel and develop his own research and development complement with a broad charter as to the areas for coverage. 13/

A month passed with no progress toward organization of the DD/R other than the establishment of a Table of Organization (T/O) for the immediate office of the DD/R. The Director of Personnel reviewed the requested staffing complement and found it in line as to positions and grades with other Agency components. A ceiling of five supergrades and eight administrative/clerical positions was requested

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and approved by the Director of Personnel and the Deputy Director for Support on 22 June 1962, the supergrades to be absorbed within the Agency ceiling and all 13 slots to be accommodated within the total FY 1963 authorization.\*

On 27 June 1962, Colonel Edward B. Giller, USAF, (formerly Deputy Chief, TSD), was appointed Assistant DD/R.\*\* From TSD were also recruited [redacted] to be 25X1 Dr. Scoville's secretary, and [redacted] to 25X1 organize the DD/R Registry and serve as its Chief.

In view of lack of progress in carrying out the DCI's directive for organizing the DD/R, Dr. Scoville at the end of June reported to the DCI on the delays encountered. As a result, Mr. Kirkpatrick produced a further draft organization plan, but Dr. Scoville was not satisfied with the proposed language relating to the DD/R's research and development mission and to the transfer of funds, personnel and other assets. 25X1

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Dr. Scoville's two assistants, [redacted]

[redacted] on 5 July 1962 presented a compromise position paper, offering an alternative to the course of action the DD/R had followed, thus far without

\*See Fig. 1, overleaf, for first T/O.

[redacted]

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success, in trying to get the DD/R into productive business. Noting that the task was not to create a wholly new function, but rather to reorganize the management of existing ones, they emphasized that freedom of action was circumscribed to an extent by Agency history, so that a distinction had to be drawn between the desirable and the possible. The tenor of their recommendations was to accept what was attainable from DD/P and get on with the work of consolidation, after which, inevitably, the question of OSI would be reopened. 14/

Dr. Scoville was, in the end, forced to accept this philosophy, since Mr. McCone chose not to join battle with the opposition. Mr. McCone said later

The reasons for the opposition appeared to me to be valid and were based primarily on the fundamental concept of organization of the intelligence establishment and specifically on the concept that the interface between DD/I and OSI, and between DD/P and TSD, was so important that to fracture it by moving these two units out from under their respective Directorships would incur great risk of impairing the fundamental missions of DD/I and DD/P, the success of which is basic to CIA's responsibility. 15/

Mr. Kirkpatrick notified the Deputy Directors and the Comptroller by memorandum of 26 July 1962 of the long-awaited [ ] setting forth the mission and responsibilities of the DD/R. In order to avoid controversies in the future he spelled out the division of responsibilities in those areas which had

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been at issue: the DD/P would continue to carry on research and development (such as TSD's) directed primarily toward supporting agent operations; any research to support Covert Action would remain in DD/P unless specifically and mutually agreed between DD/R and DD/P; any developments achieved by DD/R adaptable to DD/P operations would be reviewed jointly on reaching the breadboard stage; DD/R would be responsible for over-all guidance of all Elint activities

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It was recognized that in creating a new entity in any governmental organization, which by its very nature cuts across previously established jurisdictions, there would be matters at issue which must be reconciled. Mr. Kirkpatrick therefore urged that personnel in all directorates use their best diplomacy and tact in reconciling differences among themselves, with the right of final appeal to the Director's office. 16/

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3. DD/R Components

[REDACTED]

stated that the mission of the Deputy Director for Research was to conduct in depth research and development in the scientific and technical fields to support intelligence collection by advanced technical means, exclusive of those research and development activities to support agent operations. It further announced the establishment of the Office of Research and Development (ORD), the Office of Elint (OEL), and the Office of Special Activities (OSA), under the jurisdiction of the DD/R.

a. Office of Special Activities (OSA)

Recommendations on the transfer of DPD elements to the DD/R, which Mr. Bissell had discussed with the Kirkpatrick task force on organization, were presented to Mr. McCone on 5 March 1962. The general conclusion was to give responsibility for specialized reconnaissance projects, including research and development and operational activities thereof, together with supporting activities to the DD/R. Air activities in support of Clandestine Services operations were to be left under DD/P [REDACTED]

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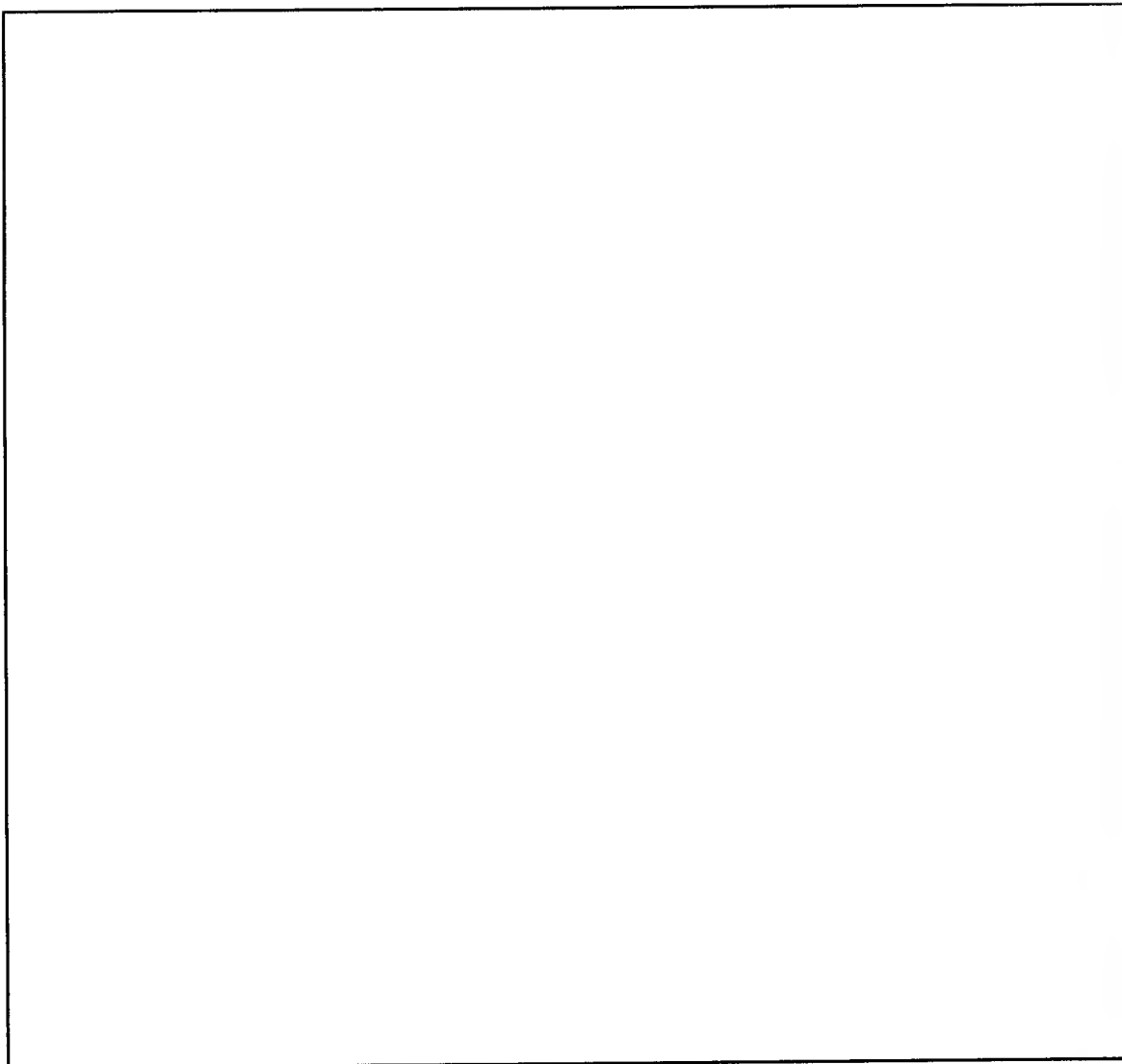
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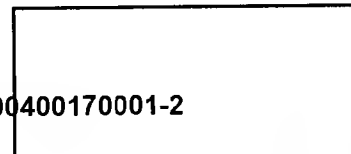
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Mr. Bissell said that some believed the DD/R should have responsibility for all research and development activities having to do with aircraft and other reconnaissance systems, and the DD/P should have all operational responsibilities. He felt this unwise for it would require a complex split within the subcomponents of DPD,

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and a vastly more complex interface between the personnel and activities of the DD/R and the DD/P. For example, a man developing a more accurate cargo parachute would be responsible to one Deputy Director while the man who would be conducting the cargo drops in the field, and who might have his own ideas on how the parachute should function, would be responsible to the other Deputy Director. Mr. Bissell said that one of the great lessons learned from the U-2 project was

that the most intimate possible administrative marriage of research and development and operations is essential if the development process is to be both swift and at the same time responsive to operational needs. It is a source of vast strength in the current and past organization of DPD that developmental, support, and operational elements were brought under common command at a level well below that of a Deputy Director. This is the essence of "project" organization as distinguished from "functional" organization. 18/

The Kirkpatrick- Schuyler report recommended that the Special Projects Branch of DPD plus the necessary supporting elements, "including those projects supporting the Department of Defense in advance reconnaissance programs," be placed under the DD/R. On  was issued by the newly-appointed Deputy Director of Central Intelligence (DDCI), General Marshall S. Carter, U.S. Army, announcing

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that the transfer would be made.\* Details of this action were left to be worked out between the DD/P and the DD/R.

After two months of negotiating the precise transfer of personnel and other assets to the DD/R, the DPD continued to function as a single unit while awaiting completion of arrangements. This created an increasing lack of clarity with regard to policy and command decisions, and on 15 June 1962 Dr. Scoville wrote to the DD/P

I believe that it is highly desirable to effect at the earliest possible date a clearcut delineation between the command and policy channels of the two major activities involved. While there can be a mutual interchange of technical assistance, I am convinced that it is highly desirable that both these units begin to operate on their own. To this effect I desire that 18 June 1962 be the date on which separate command channels should be activated. Thus, it is expected that on that date air support activities will report to the DD/P while the redesignated Office of Special Activities will report to the DD/R. 19/

The desired division of command did not come about and Dr. Scoville, after turning down the DD/P's third draft proposal for a split of DPD resources, wrote to the DD/S on 28 June 1962 for assistance in obtaining the support positions required by OSA. He said he quite understood the DDP's reluctance to weaken his own structure by giving

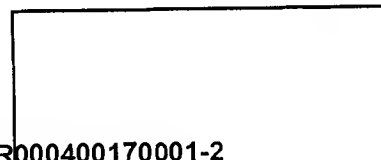


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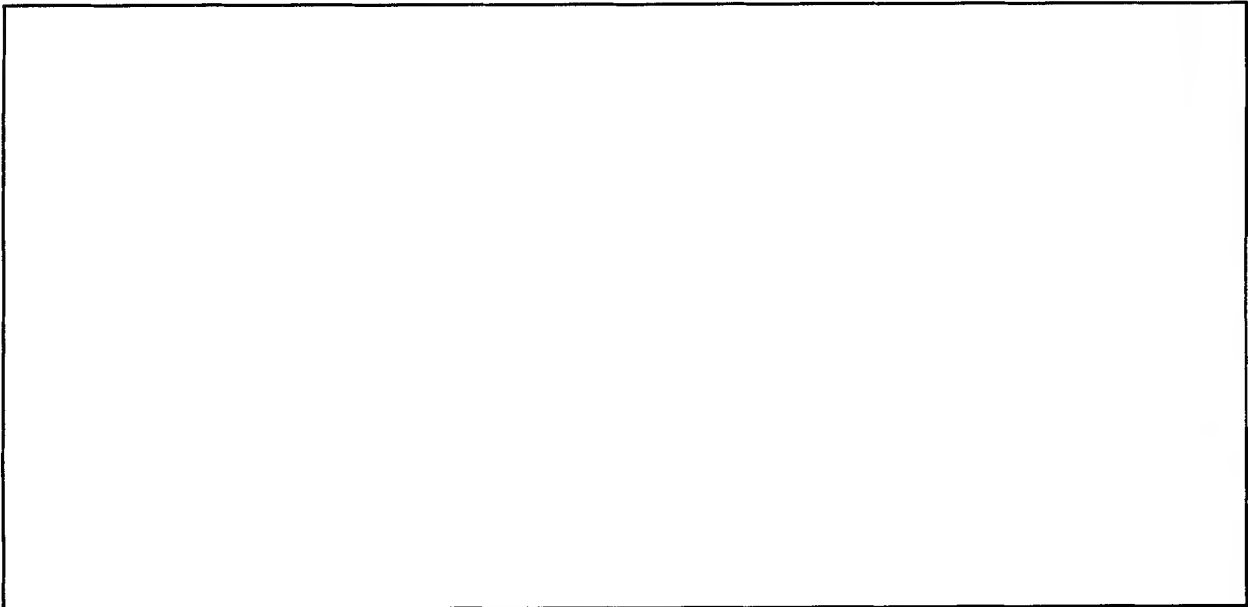
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up personnel, but the DD/R did not wish to take the responsibility for a critical program without the people to do the job. 20/

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It had taken from February to November in 1959 to reach agreement on amalgamation of DD/P area air support activities with the special aerial reconnaissance projects under the DPD; it required from February to August in 1962 to reverse this organizational arrangement.

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The Chief of DPD at the time of its division between OSA [redacted] was Colonel Stanley W. Beerli, USAF, whose tour with the Agency was to finish at the end of July 1962; therefore his Deputy, Mr. James A. Cunningham, Jr.,

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25X1 was designated Acting Assistant Director for Special Activities at the beginning of August 1962 when OSA was established. Meanwhile, a candidate was sought for the AD/SA job, which entailed the management of an organization of more than [ ] in Headquarters and at domestic and foreign bases, as well as an equal number of contractor personnel for whom the AD/SA would have indirect administrative responsibility. The ideal individual for this job, according to Colonel Giller's recommendation, which was approved by Dr. Scoville, would be

...a relatively senior Air Force colonel or brigadier general\* having recent command experience in SAC, some familiarity with R&D problems and a previous tour in Headquarters Air Force. This officer's strong point should be the organizing and managing of a diversified and dispersed organization... 21/

The candidate proposed by the Air Force and accepted by the DD/R and DCI was Colonel Jack C. Ledford, who was designated Assistant Director for Special Activities effective 4 September 1962. At the same time Mr. Cunningham was named Deputy AD/SA. A detailed history of OSA from 1954 through 1968 is on file in the Office of the DD/S&T.

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\*Although the wisdom of placing an active duty Air Force officer in this slot has been questioned from time to time, the practice has continued up to the present (1972).

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b. Office of Elint (OEL)

The CIA Elint program, up to the time of its amalgamation under the DD/R, had been the responsibility of a number of components: Office of Scientific Intelligence, DD/I; Office of Communications, DD/S; Technical Services Division and Development Projects Division, DD/P; and several DD/P area divisions. Coordination had been effected by means of an Elint Advisory Committee and an Elint Staff Officer, but unified control was badly needed, beginning with research and continuing through collection, analysis, and feedback, in order to exploit fully and successfully this fruitful source of intelligence. Despite the number of offices involved with Elint, the turnover to DD/R of the Elint program was accomplished fairly smoothly, although it did require many months to consummate.

Mr. George C. Miller, who was slated to be the first Assistant Director for Elint (AD/EL), began the early planning for OEL from his position as Chief of the Elint and Special Projects Division of OSI in February, 1962, was officially named AD/EL effective 30 July 1962, and was largely responsible for bringing the various elements of this new office together and defining its mission. The AD/EL was charged with establishing and managing the

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Agency Elint Program; providing technical support and guidance for Agency Elint projects and analyzing and re-  
porting the product thereof; supervising or conducting all research and development for Agency Elint and Comint activities; advising the CIA Sigint Officer in matters of Elint policy; and maintaining liaison on technical matters with the National Security Agency (NSA) and other government agencies. 22/

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[redacted] formerly of the  
Office of Communications, assumed the position of Deputy  
to Mr. Miller on 15 October 1962. [redacted]

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c. Office of Research and Development (ORD)

Unlike OSA and OEL, which were reorganized from existing activities, ORD had to be organized "from scratch"—a new organization with no existing structure, positions, or ceiling authorization. The purpose of its establishment was to make maximum use of science and technology in accomplishing CIA's mission by advancing the frontiers of knowledge in some areas and developing new concepts in the application of existing knowledge in other areas. Dr. Scoville requested as a tentative T/O for ORD a ceiling of [redacted] against which to recruit, and an authorization of [redacted] for FY 1964, all of which was approved in principle by the Acting Director, General Carter, on 9 November 1962. A recruiting program to secure well qualified candidates from the entire spectrum of scientific disciplines was begun in coordination with the CIA Office of Personnel.

Colonel Giller was designated Acting Assistant Director for Research and Development (in addition to his position as Assistant DD/R) on 29 November 1962 in order to give leadership to the planning and organization of this new office. [redacted]

[redacted] the Deputy Assistant Director of ORD

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on 9 September 1963. Colonel Giller wore two hats until his departure in May 1964, when Mr. Chapman became Acting AD/RD. (He was confirmed as Assistant Director on 19 March 1965.)

At the end of 1962, ORD was given a few of TSD's research projects (those which fell into the category of general intelligence application and which were not exclusively oriented toward the Clandestine Services' requirements). One of these was the project looking into the intelligence applications of [REDACTED]

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[REDACTED] who was in charge of this activity in TSD, moved to ORD along with that work, later becoming Chief of the [REDACTED] of ORD. The work of that division, and the others which were formed as ORD became organized, is described fully in the ORD History.

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#### 4. Problems of Space and Personnel

In the latter half of 1962, while the Directorate for Research was slowly taking form, Dr. Scoville's small staff faced the problems of finding appropriate and sufficient space in the new Headquarters Building at Langley for housing its current and anticipated personnel, and recruiting, setting pay scales, and establishing a career service for scientific and other professional personnel.

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Dr. Scoville and his personal staff first occupied space in the 3-E-1400 complex at Langley; OSA was divided between two overcrowded areas on the sixth floor, B wing, and on the ground floor, E wing; OEL was spread out in several non-contiguous areas on the second and fifth floors; and ORD existed only on paper. The space situation at Langley late in 1962 was extremely tight and the DD/R's requests for more and better space were to little avail at that time, even though the priority establishment of the new Directorate had the personal interest of the Director's Office.

An inquiry by the Director's Office in mid-September 1962 concerning the fulfillment of the DD/R's support requirements brought the reply from the DD/S that work on the Directorate's T/O was moving ahead and there was no reason why progress should be held up since a tentative ceiling could be issued with later review. The transfer of personnel from other components to the DD/R and recruitment of a full complement would take months at best, possibly two years; therefore the DD/S did not concur in Dr. Scoville's position that he could not take over the existing units of his Directorate in place, or that it was impossible for him to assume his responsibilities until he got all his personnel into contiguous space.

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There were many problems and frustrations which the DD/R and those trying to support him had to cope with in order to launch the new organization; the DD/S felt, however, that with a practical and cooperative approach, the organization could move forward in an orderly manner. 23/

By the end of 1962, through the relocation of certain Agency units outside the Langley Building, more space was freed. The DD/R's priority needs were met little by little during March and April 1963, so that OSA and OEL had secure space behind barriers to cover their most pressing needs.

The recruitment program which was begun in 1962 focused attention on the need to establish grades and pay scales for the various categories of scientists required to staff the new Directorate. When the first T/O was approved in September 1962, Dr. Scoville requested of the DD/S that an improved grade structure, or special salary arrangement, be devised to enable the acquisition of the caliber of personnel needed to carry out the Agency's mission in the scientific field. He asked that the Assistant Directors for OEL, OSA, and ORD be set at supergrade GS-18, and that their Deputies be set at supergrade GS-17; that a special salary scale for hard-to-get categories be set up; and that any supergrade activities transferred to DD/R

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should have their concomitant supergrade slots transferred along with the activities. 24/ Colonel White, then DD/S, acted favorably on these requests and a proposal for a special salary system covering scientific and technical personnel was developed and circulated in due course for Agency coordination. 25/ The plan was later published as

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[redacted]

The initial DD/R personnel ceiling approved in September 1962, and the first increase approved in mid-November 1962, are shown below.

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O/DDR  
ORD  
OEL  
OSA

	First Ceiling Sept 1962	New Ceiling Nov 1962
	[redacted]	

A chart showing the over-all growth in personnel for the Directorate from 1962 to 1970 can be found at Tab 2 of Appendix C, along with explanatory notes on the specific increases and decreases.

#### 5. "R" Career Service Established

In Dr. Scoville's initial draft of activities to be assigned the DD/R he included the establishment of a scientific and technical career service, under the DD/R's

\*See pp. 35-36, below, [redacted]

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chairmanship, to satisfy Agency-wide needs. On 8 May 1962 the Chief, Plans Staff, Office of Personnel, [ ]

[ ] spelled out for the DD/R the agreed procedures governing actions on personnel assigned to the DD/R during the initial development of the Directorate, pending the establishment of an appropriate scientific and technical career service:

a. Transferees from other components would retain their Service Designations, later transferring to the "R" designation, unless otherwise agreed by the heads of the two career services.

b. Recruits from outside would be designated "UD" until their identification with the "R" Service.

c. Support positions assigned to DD/R would carry the designation of the appropriate support service.

d. Recruitment and assignment to DD/R from outside would be handled between the Executive Officer, DD/R, and the Personnel Operations Division.

e. The DD/R would approve promotions of all personnel assigned to him except those who by mutual agreement with the head of another career service were identified as permanent members of that service. 27/

Failure to achieve the transfer of all Agency scientific activities to the DD/R caused Dr. Scoville to

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reconsider the concept of an "R" Career Service and he noted to the DCI on 20 June 1962

...The proposed assignment of responsibilities contained in.../Mr. Kirkpatrick's draft/ would result in having a majority of the technical personnel in the Agency not under the command of the DD/R. OSI, TSD, and OC would each have more technical personnel than the entire DD/R. An analysis of the problems involved in carrying out a true S&T Career Service within this structure indicates that the problems would be virtually insurmountable—therefore not a practical concept. In the place of a career service, the DD/R would now recommend a watered-down career council type of arrangement which would attempt to improve the management of S&T personnel by mutual agreement between the major Agency S&T components. 28/

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The DD/R Executive Officer, [REDACTED]

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[REDACTED] drafted a proposal to establish a "Scientific and Technical Career Service Committee" with the objective of improving the Agency's capability to attract, utilize and retain qualified S&T personnel necessary to accomplish the Agency's mission. The notice was circulated for concurrence at the end of June 1962 but its approval and formalization was delayed during the struggle to get the DD/R organization off dead center. It was resubmitted for approval on 2 November 1962 and several changes recommended by the DD/P, DD/S, and DD/I were incorporated: (a) the name was changed to "Scientific and Technical Personnel Advisory Committee" in order to avoid the use of the words

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"Career Service" in its title; (b) the committee was to be advisory to the Director of Personnel who would act as Chairman rather than the DD/R; and (c) all Agency components using S&T personnel would participate.

The DD/R on 19 February 1963 issued Directorate Notice DD/R 20-1\* setting up its internal career service and outlining the administrative structure for implementing the Agency Career Program within the "R" Career Service. OSA, OEL and ORD each in turn set up its own internal career panel.

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The [ ] establishing the Scientific and Technical Personnel Advisory Committee was finally issued on 26 March 1963 and the first meeting was held on 25 April 1963. The Director of Personnel, Emmett Echols, chaired the first meeting and representatives of the four Deputy Directors attended as members.

The first agenda item to be considered by the Committee was the Scientific Pay Schedule (SPS), which had been approved by the DDCI, General Carter. It was issued on [ ]

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\*Appendix A, Tab 5.

[ ]

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and carried the title "Management of Specially Qualified Scientific Personnel." It established a personnel management and pay administration system for personnel assigned to selected scientific positions involving (1) the planning, organizing, directing, and coordinating of major scientific programs, or (2) the planning and execution of productive research or consultation of a very high order in a specialized branch of a scientific field.

Each position under the SPS was to be designated by title and occupational code used for comparable general schedule positions but using the prefix SPS, rather than GS. Pay rates were fixed between the minimum rate of GS-16 to the rate of GS-18 (corresponding to the first four steps of GS-16, the first four steps of GS-17, and GS-18, a total of nine steps). The DDCI was authorized to establish ceilings for total SPS positions and total salary Agency-wide. Qualifications for appointment were set out along with particular responsibilities of the DDCI, the Director of Personnel, the various Deputy Directors, the Comptroller, and the S&T Personnel Advisory Committee.

The numbers of SPS and supergrade positions authorized the DD/R for Fiscal Year 1964, by Office, were as follows:

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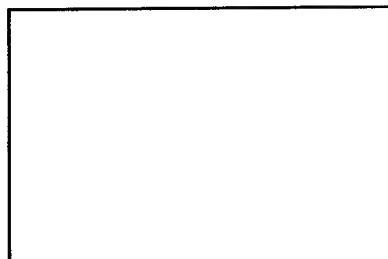
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Supergrades

SPS

O/DD/R  
OCS  
OSA  
OEL  
OSI  
ORD



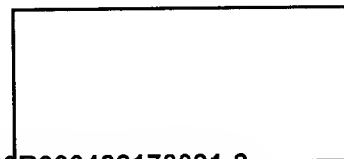
As of July 1963, when the allotment of these positions became effective, the Directorate for Research was in the process of being reorganized as the Directorate for Science and Technology with two additional offices, OSI and OCS, being assigned to the DD/S&T effective 5 August 1963.\*

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\*Further developments in the "R" Career Service under the DD/S&T are covered in Chapter III, beginning at p. 109.

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II. The Directorate Expanded and Designated Directorate  
for Science and Technology, August 1963

A. DD/R Organization Reviewed by Mr. McCone

The frustrations encountered in the attempt to organize CIA's scientific activities under one roof, with less than the complete accord of the Agency's hierarchy, were paralleled by the trials experienced in trying to reach agreement with DOD on the respective roles of the participants in the National Reconnaissance Program (NRP). Dr. Scoville had the responsibility for both of these interlocking efforts and thus suffered a double measure of the resultant exasperations. It may be said that Dr. Scoville probably did not pursue either goal as aggressively as Mr. McCone would have desired. Some staff members believed that Dr. Scoville was "too gentlemanly" for the kind of fight which developed; others recall hearing him on numerous occasions express his frustration over the lack of support from the top in what he was trying to accomplish.

Mr. McCone's expectations with regard to his planned scientific directorate had been equally dampened by the lack of support for the plan displayed within the Plans Directorate and the Intelligence Directorate. He had stated his desires with regard to the kind of set-up

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he wanted and had left the reorganization up to the DDCI, the Executive Director, and the DD/R. At meetings with those three concerning the Research Directorate Mr. McCone continued to press for a more vigorous effort toward completion of the reorganization; however, he stopped short of issuing a directive to the DD/I and the DD/P ordering them to relinquish all scientific elements under their control to the DD/R.

On 1 October 1962, Mr. McCone in a private session with Mr. Kirkpatrick discussed the DD/R set-up at length and said he was not convinced the organization was developing along correct lines. He felt the whole CIA scientific effort was unimaginative and not sufficiently aggressive, and that it did not make its weight felt in the government. He said that in the entire time he had been Director he had never had either the DD/P or the DD/I raise scientific or technical matters with him. He was personally convinced that scientific and technical collection would surpass that by agents. 30/

Mr. McCone inquired as to the status of the scientific advisory group he had asked be set up, and was told by Mr. Kirkpatrick that since the DD/R had not succeeded in acquiring OSI and all of TSD, Dr. Scoville

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saw no immediate purpose in setting up such a group. Mr. Kirkpatrick had therefore asked [ ] of the Director's Office, to take over the setting up of a scientific advisory board to supersede the DeFlores Committee, which then was concentrating principally on scientific applications of interest only to TSD/DD/P. Mr. McCone alluded to the fact that the White House Science Adviser had acted to reestablish the Bethe Panel to evaluate the current Soviet nuclear tests. He regretted that the Agency had failed to take the initiative and do that job. 31/

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Mr. Kirkpatrick referred to the possibility that Dr. Scoville might resign due to his frustrations, a matter which Dr. Scoville had discussed with others, but not with the Director or Mr. Kirkpatrick. Mr. McCone said that he did not care whether it was Dr. Scoville or someone else who ran the DD/R, as long as it was organized properly and the job was done correctly. He said he would not discuss the DD/R organization further with Dr. Scoville until he (Mr. McCone) had thoroughly thrashed the matter out with General Carter and Mr. Kirkpatrick. He expressed an interest in knowing why the members of his Executive Committee felt the present set-up was satisfactory, but he

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said he had no intention of conducting such a poll since it was the DDCI's responsibility to run the Agency. 32/

On 3 October 1962 Mr. Kirkpatrick met with Dr. Albert D. Wheelon, who had succeeded Dr. Scoville as Assistant Director for Scientific Intelligence on 1 July 1962, and told him that the Director was not satisfied with the organizational structure of the DD/R, but still felt that all scientific people in the Agency should be included. Dr. Wheelon said he felt that OSI at that time continued to fit more logically into the DD/I. He said, however, that if the DD/R should inherit [redacted] [redacted] the proposed Missile and Space Technical Intelligence Center\*\* then it would be more logical for OSI to come under the DD/R. He said he had suggested to Dr. Scoville that both of these activities should be within the DD/R, but had not been able to stimulate much interest on Dr. Scoville's part in pressing for their acquisition. 33/

\*\*This proposal (known as MISTIC) later developed into CIA's Foreign Missile and Space Analysis Center (FMSAC).

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Dr. Scoville's reluctance to reach out for additional activities is understandable when one considers the difficulties he had already encountered in trying to bring together those which had received the Director's blessing.

B. PFIAB Recommendations on Technical Capabilities

Several months passed with the DD/R organizational status unchanged. Activities related to the Soviet missile build-up in Cuba took precedence over almost all other activities between September 1962 and the end of the year. In January 1963, Dr. James Killian, then Chairman of PFIAB, raised with Mr. McCone the question of progress in the organization of the Agency's scientific and technical intelligence activities, indicating that further pressure toward that end could be expected.

At the March 1963 meeting of the PFIAB, recommendations for action by the Intelligence Community to improve its capabilities across the board were given to Mr. McCone and to the Secretary of Defense. Section 13 of those recommendations related specifically to scientific and technological intelligence and because of its influence on subsequent developments in the Agency's scientific and technological activities, it is quoted here in full.

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13. Strengthening Technical Capabilities.  
The Board recommends that top priority be given to the creation, organization and exploitation of new resources of science and technology for use in intelligence activities.

Except in limited fields, of which photographic reconnaissance is one, we have merely scratched the surface in exploiting the use of science and technology for intelligence purposes.

To move ahead with an adequate program, the Board proposes the following:

(a) The creation of an organization for research and development which will couple research (basic science) done outside the intelligence community, both overt and covert, with development and engineering conducted within intelligence agencies, particularly the CIA. Institutional research, academic and industrial, must be joined to mission-oriented research.

(b) The installation of an administrative arrangement in the CIA whereby the whole spectrum of modern science and technology can be brought into contact with major programs and projects of the Agency. The present fragmentation and compartmentation of research and development in CIA severely inhibits this function.

(c) The clear vesting of these broadened responsibilities in the top technical official of the CIA, operating at the level of Deputy Director. Recasting and extending the CIA's present Office of Research may accomplish this. If it does not, alternative administrative arrangements must be devised. This technical official as we conceive his responsibilities, should have reporting to him the following groups, each managed by a competent technical leader:

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(1) Technical Requirements Group, to generate and review the technical needs of the whole CIA operation (close coordination with the Defense Intelligence Agency is implied.)

(2) Systems Engineering Group, constantly to examine technical requirements as to feasibility, cost and values, in the light of evolving knowledge and discovery.

(3) Development Group, to undertake execution of suitable, approved, systems plans. (Contracting for components, assemblies, and equipment might be a preferred mode, but this is different from the "project management" so often used now.)

(4) Field Engineering Services Group, to aid operational elements in installation, use and maintenance of new facilities. A quality control regime should be instituted to follow reliability and other performance of equipment.

(5) Behavioral Sciences Group, to augment classic roles of psychology and medicine in intelligence planning and operations. For example, professional anthropology, programmed teaching and learning and audio and visual perception might be covered. (Programmed instruction may have a particularly strong place in role playing, disguise and "foreign" operations by agents.)

(d) Formation of a few special research and development groups that may be part of a natural science division, probably coordinated with the behavioral sciences group, that cross-connects various classic disciplines in ways of primary importance to intelligence missions. Thus, studies of camouflage in plant, bird and animal systems (where it seems to be a highly developed element in survival) coupled with physical optics, radiation and spectroscopy,

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might reveal new methods of both disclosure and concealment.

(e) Actions within the DOD: (1) to emphasize research in advanced sensing systems, advanced photographic systems, and in other sophisticated areas of intelligence gathering and (2) to strengthen advanced research in the signals intelligence field, particularly to prepare for the environment in which signals intelligence must function over the course of the next ten years.

The importance of intelligence warrants a major effort to draw fully upon the most advanced science and the best scientific brains in the nation. Our scientific intelligence should be so sophisticated and advanced that it will be beyond the capabilities, if not the imagination, of our adversaries. 34/

Mr. McCone responded to the PFIAB's recommendations via the President's Special Assistant for National Security Affairs, Mr. McGeorge Bundy, on 15 April 1963. Since no specific organizational or administrative developments geared to the comprehensive concept spelled out by the PFIAB had occurred, it was deemed best to generalize about progress to date and plans for the future. Mr. McCone reported that since taking office he had given top priority to the creation, organization, and exploitation of new resources of science and technology for use in intelligence activities through the creation of a new Deputy Directorate for Research with three offices under it. He also reported with regard to future plans

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In addition, I considered the addition to the DD/R of the Office of Scientific Intelligence from the DD/I and the Technical Services Division from the DD/P, but upon strong staff advice suspended action on this for a period of observation. That period has now elapsed and I will move ahead with additional changes, starting with an intra-Agency board for staff direction of the scientific and technical effort, and giving the DD/R expanded responsibilities...35/

C. Dr. Scoville Resigns

Mr. McCone's undertaking to the PFIAB to move ahead with expanding the DD/R's responsibilities was not put into immediate action. Meanwhile, on 25 April 1963 Dr. Scoville presented Mr. McCone with a letter of resignation wherein he outlined the frustrations he had suffered in attempting to accomplish the Director's objectives. He said that with few exceptions the working components had resisted any transfer of their responsibilities or personnel to the new Directorate and that senior officials had been dilatory and indecisive in facing up to the problems of establishing a new organization within the Agency. Dr. Scoville said in his letter of resignation

While in my discussions with you, you have always indicated your belief in the original basic concept of the DD/R, the actions and statements of senior Agency officials have made it very clear that they do not agree with this concept and that no one is willing to face up to the problems of implementing it. During the year virtually none of my recommendations have been adopted. 36/

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Dr. Scoville added that, while the Deputy Directorship of the National Reconnaissance Office had been granted to CIA, he felt his own tenure in that position would be unrewarding because of the previous stormy history of the program. He therefore wished his resignation to take effect by 1 June 1963. (The date was later extended to 14 June 1963.)

Mr. McCone's choice for a successor to the DD/R soon settled upon Dr. Wheelon (then AD/SI), for whose talents the DCI had developed a high regard. Dr. Wheelon in the spring of 1963, as AD/SI, had begun to attend the Director's morning staff meetings, first in connection with preparations for the nuclear test ban treaty negotiations scheduled for July 1963. Mr. Kirkpatrick later remarked of the great input from the scientific and technical side of the house due to Wheelon's attendance at the morning meetings, and said

...I am impressed by the fact that his presence not only adds to the breadth of analysis that we receive, but I am sure also tends to keep this particular "game honest." I am impressed by the fact that we did not have that type of input before his attendance. 37/

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D. The DD/R Acquires OSI

There still remained to be settled the question of enlarging the scope of the Directorate, a matter on which Dr. Wheelon had firm ideas. Mr. McCone solicited his recommendations as to the form such a reorganization should take and, after speaking at length with a variety of people having unusual knowledge or historical perspective on the pressures against the DD/R concept, Dr. Wheelon concluded that there were two options open to the DCI: (1) Abolish the present DD/R and create a small research and development review staff which would report to the Director, and would review all programs and budgets for CIA R&D including that for joint programs such as NRP; this would require that OEL, OSA, and ORD be reintegrated into other Agency components. (Dr. Wheelon noted that he understood the DCI was not in favor of this option.) (2) Create an improved DD/R invested with authority over all research and development, including budgetary review, funding all R&D money to the DD/R for transfer to the accomplishing component (TSD, O/C, etc.); also make the DD/R the DCI's delegate in the review of all budgeting and programming for the NRP, just as Secretary McNamara delegated his responsibility to Dr. Fubini. 38/

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Assuming the DCI's preference for the second option, Dr. Wheelon said he now believed OSI should be transferred to the DD/R, although it should continue to use the DD/I as its primary channel for reporting substantive intelligence and contributing to national intelligence estimates. However, the DD/I should be relieved of management responsibility for OSI. OSI should be set in a scientific and technical environment and selection of supervisors and decisions on reorganization should be made in an atmosphere of thorough understanding of its problems and common professional experience. (Dr. Cline was at the time working on a plan to reorganize OSI which Dr. Wheelon and others felt would fragment the Agency's scientific and technical effort rather than giving it greater emphasis.) Dr. Wheelon believed that additional benefits would accrue from the transfer of OSI through joint use together with other components of the DD/R of contractors, computers, and specialized personnel. It would become easier to promote the desirable rotation of scientific personnel between analysis and development, and an organizational fusing of analysis and development would ensure prompt technical feedback from foreign developments to our own programs. 39/

The above views of Dr. Wheelon were stated in his memorandum to the DCI of 17 July 1963, on which date

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he met with Mr. McCone and General Carter. He had listed in addition the following R&D functions which he considered should be assigned to the DD/R:

1. All CIA Elint development and operations except clandestine operations.
2. All overhead reconnaissance development and operations assigned to CIA by NRO.
3. All computer development and scientific computation activities  25X1
4. Development and operation of a collection and analysis center for foreign missile and space intelligence.
5. Responsibility for basic R&D for assigned DD/R activities.
6. Responsibility for basic R&D for NPIC, DD/P, DD/S, etc., as requested, or as deemed appropriate in subsequent budget and program reviews. 40/

Thus, Dr. Wheelon at the 17 July meeting put his cards on the table by cataloguing his prerequisites for taking on the DD/R job.

A determined effort was meanwhile being made by the DD/I, Dr. Cline, to persuade the Director that the whole concept of a scientific directorate was faulty and that the DD/R should not be given any more activities,

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particularly not those of OSI. He wrote to the Director on 16 July 1963

My understanding of the DD/R concept is that creation of a new Deputy Directorate was based on three arguments:

a. Pete Scoville needed a Deputy Directorate for leverage with the Pentagon and to show the outside world that CIA takes science seriously.

b. The DCI wanted in every way to emphasize scientific inquiry into new techniques of intelligence collection.

c. Pete Scoville wanted all "scientists" to work together on the grounds that they are clubby and a "critical mass" of them makes for new ideas. 41/

Dr. Cline did not disagree with these arguments but noted that most of the scientists at work in CIA were not the inventive-engineer type but scientific intelligence analysts (such as those in OSI) who worked best in close intellectual contact with other analysts working in the economic, political, and other fields which supplement the study of foreign technology and science. He concluded that the Agency should maintain its "scientists" in three administrative compartments according to task, as currently was the case, and suggested that a new DD/R should head a small, high-quality, creative research and development staff which would operate as an idea factory rather than a line component of the Agency. 42/

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On 24 July 1963, Mr. McCone set down in a memorandum for his own use in making a decision on the expansion of the DD/R the background and developments since the establishment of the DD/R eighteen months previously. He underlined the fact that he had never been satisfied with the views expressed by the Agency's hierarchy which had the net effect of reducing the scope of the DD/R; however, the arguments had been persuasive for him to leave certain units where they were. He now wished to go forward with plans to bring the DD/R up to its original concept, but wanted to be assured that the following questions were satisfactorily answered:

a. If OSI is under DD/R, can I be absolutely sure that OSI will take directions concerning tasks envisaged by DD/I, that the support for DD/I and the Board of National Estimates and the components thereof is continuous, timely and uninterrupted under all circumstances, that there will be a proper integration of technical findings and reporting on Soviet missiles, space, nuclear weapons, etc. with corresponding economic and political opinions developed in OCI, ORR, etc., and finally that we will not have impaired the so-called "flow of information" essential to DD/I and BNE.

b. If the research and development of TSD is placed under DD/R, can DD/P always be assured of timely and adequate support in connection with their research requirements?

c. If the Automatic Data Processing Staff is pulled together as contemplated under DD/R (and this seems logical) would it break the

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line of command in all three Directorates so as to seriously disrupt the respective organizations. If such is the case, it might be that DD/R could own a small highly specialized computer planning staff that could direct the utilization of all our computer assets...

I can see great advantages to the plan. I can also see dangers after a year and a half of study (and the loss of Scoville because we refused to go this route), unless Cline, Helms and White are all aboard 100% and agree that the above questions have been satisfactorily answered. 43/

Having put these questions, Mr. McCone left to General Carter the task of persuading the Deputies to go along.

On 27 July General Carter had a meeting with Dr. Cline, who stuck adamantly to his position with regard to OSI. Later the same day he sent General Carter a memorandum in which he recorded at length his very strong views in the matter. He said that the correlation and evaluation of intelligence relating to national security must be done in an impartial and intellectually objective manner, free from operational or departmental bias. CIA's reputation had been damaged in the past by the "Bay of Pigs" charge that the Agency's operational people evaluated their own activities and product. Therefore, while the concept of a separate entity in CIA to conduct scientific and technical intelligence collection activities was valid,

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the assignment to the same entity of responsibility for evaluation and analysis of S&T data would certainly be suspect. Perhaps more important, Dr. Cline said, was the loss to the DD/I of the S&T analysis function which would sorely handicap him in the task of insuring a CIA capability for providing an objective, integrated attack on the key problems of Soviet strategic weapons development and deployment, and other S&T developments abroad, and of integrating the results with the over-all analysis of related political, military, and economic developments. 44/

General Carter knew that the die was already cast with regard to OSI and he passed Dr. Cline's memorandum to the DCI with a note recommending no general meeting to discuss its contents but suggesting Mr. McCone have a private talk with Dr. Wheelon on the future method of operation he envisaged for OSI under the new set-up, after which the DCI could better chart a course with Dr. Cline. 45/

At that point, the lines were fairly clearly drawn with regard to enlarging the DD/R:

1. The DCI, with the urging of PFIAB, wanted to reconstitute the DD/R as originally envisaged and he wanted Dr. Wheelon to run it.

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2. Dr. Wheelon was willing, given the transfer of OSI, the over-all control of R&D, a computer center, and promise of a missile intelligence center.

3. The DD/P felt TSD should retain all R&D related directly to agent operations, which was largely applications engineering and hardware development.

4. The DD/S did not oppose the centralization of computer activities, provided all users throughout the Agency were afforded the services they required.

5. The DDCI and the Executive Director, who had earlier had some qualms over enlarging the DD/R, had been won over to the McCone/Wheelon position.

Mr. Kirkpatrick, while opposed to change for change's sake, or even for the accommodation of an individual, said that he felt developments over the last year warranted the changes planned. He felt that Dr. Cline's arguments for retaining OSI were not persuasive and that the DCI could be sure that support for the DD/I under the new set-up would be continuous, timely and uninterrupted in all circumstances, and that the senior officers of the Agency had sufficient breadth, quality, and good will to ensure the success of any decision made. 46/

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At the end of July, Mr. McCone left Washington  
for a ten-day trip and General Carter, as Acting Director,  
on 5 August 1963 signed and published [redacted]

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[redacted] which stated

Effective 5 August 1963, the following organizational changes are announced:

1. The Deputy Directorate for Research is renamed the Deputy Directorate for Science and Technology.

2. The Office of Scientific Intelligence is transferred from the Deputy Director for Intelligence to the Deputy Director for Science and Technology.

3. The Automatic Data Processing Staff is renamed the Office of Computer Services and is transferred from the Deputy Director for Support to the Deputy Director for Science and Technology.

At the same time, [redacted] announced  
that Dr. Albert D. Wheelon was named Deputy Director for  
Science and Technology, and Chairman of the CIA Research  
and Development Review Board, and that Mr. John F. Blake  
was named his Executive Officer.

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A formal announcement of the reorganization and  
introduction of Dr. Wheelon was made by General Carter  
at a mass gathering of about 500 of the Directorate's staff  
in the Agency Auditorium.

\*Appendix A, Tab 10.

\*\*Appendix A, Tab 11.

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Dr. Cline, even though the battle to keep OSI was obviously lost, felt impelled to make a last, emotional rejoinder to the publication of the organizational change. He wrote to General Carter on 6 August saying that he was distressed to learn of the reorganization of the Agency to expand the functions of the DD/R at the expense of the DD/I analytical complex. He said he wished to put clearly on record his professional judgment that the decision taken complicated the clean assignment of responsibility for specific analytical tasks in the Agency among the several Deputy Directorates; diminished the capability of the DD/I complex to provide objective, integrated evaluations of foreign developments involving scientific and technical data intimately enmeshed with military, economic, and political data; and, in short, would prove unfortunate for CIA. 47/

In setting up the DD/S&T, there was no further withdrawal of DD/P functions (i.e., the remaining TSD research and development,  were left in place, with the expectation that there would be further discussions at a later date).

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III. Directorate Under Dr. Wheelon: August 1963 - September 1966

A. Background of Wheelon Appointment

Dr. Albert Dewell Wheelon received the degree of Doctor of Philosophy in Physics from the Massachusetts Institute of Technology in 1952, at the age of 23. In 1953 he became a senior member of the technical staff of the Space Technology Laboratories of Ramo-Wooldridge, the principal work of which related to the U.S. Air Force ballistic missile and space programs, and missile technical intelligence collection and analysis. Dr. Wheelon had nine years of experience with STL during which time he also lectured in Electromagnetic Theory at the University of California in Los Angeles, and served in an advisory capacity to the Guided Missiles Intelligence Committee of USIB, the Air Force Scientific Advisory Committee, and the President's Scientific Advisory Committee.

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[REDACTED] When in February 1962 Dr. Scoville was asked by Mr. McCone to head the new Directorate for Research, Dr. Scoville, with Mr. McCone's support, persuaded

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Dr. Wheelon to take on the direction of OSI.

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Dr. Wheelon came into OSI in June 1962 shortly after Dr. Ray Cline became Deputy Director for Intelligence. During the ensuing period of adjustment, certain differences became apparent between the two in their general orientation and method of operation, and some accommodations were made in mutual respect. At the end of four months in the position of AD/SI, Dr. Wheelon, in a conversation with Mr. Kirkpatrick, commented on Dr. Cline's brilliance and energy, but noted that the DD/I's interest in the current intelligence field was far greater than in scientific intelligence. Dr. Wheelon said he had been taken to task by the DD/I for reportedly having been a bit irascible with various DD/I staff members. Regular meetings had been instituted between Dr. Wheelon and Dr. Cline in order to keep the latter informed of what was going on in OSI. 48/

In the same conversation with Mr. Kirkpatrick Dr. Wheelon confessed that he at first had misgivings about the job, but now felt confident that he could handle it.

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He feared, however, that if he did the job as it should be done for a few years, he might have to annoy or offend a number of people and thus would not be able to continue to make a career in CIA. He had instituted quite a number of changes in OSI, particularly with regard to personnel matters. His senior supervisors were to devote at least 30% of their time to personnel, getting to know their people and what they were doing, easing out any who fell below standards of performance, and on the other hand encouraging analysts to write better reports and working to get better grades for those who performed well. 49/

In June 1963, when Dr. Scoville resigned as DD/R, Mr. McCone asked Dr. Wheelon to take on the task of directing the reorganization of the Directorate to encompass all scientific and technical activities of the Agency, as recommended by the PFIAB. When Dr. Wheelon accepted that challenge, he carried to the new job the same purpose he had followed as AD/SI--to do the job as he believed it should be done even though he might annoy or offend some people along the way. The problems he faced in organizing the Directorate are described in the preceding and following pages; i.e., the general antipathy within the Agency toward the carving out of a separate scientific directorate; budgetary stringencies; personnel problems; and the

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difficulties involved in integrating all scientific functions of CIA under one roof. In addition to these internal problems, there was a continual struggle with the Pentagon in the effort to maintain a CIA role in overhead reconnaissance within the National Reconnaissance Program.

Dr. Wheelon took on the job of Deputy Director for Science and Technology in August 1963 at the comparatively young age of 34. Among Directorate personnel who worked with him there was no lack of respect for his technical brilliance, or admiration for his energy and drive. There were some, however, who believed that his human relations on the job were in some cases unnecessarily harsh, resulting in the alienation of some staff members. This was part of the price for building up the Directorate which Dr. Wheelon had indicated he was prepared to pay.

B. DD/S&T Organization: Additional Components

A period of consolidation and build-up of the Directorate for Science and Technology took place during 1963-64, encompassing the integration into the Directorate of the newly acquired Office of Scientific Intelligence and the Office of Computer Services; the later establishment of the Foreign Missile and Space Analysis Center (FMSAC); the recruitment of qualified staff, including a number of high-level appointments to the various components

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of the Directorate; and the organization of several boards and panels to advise the DCI and the DD/S&T on scientific and technical matters.

Mr. McCone, reporting to PFIAB on the reorganization of the Directorate, wrote in September 1963

...I believe we have now created a complete and inclusive scientific and technical organizational unit, allowing for the greatest degree of cross-fertilization of the various scientific disciplines. The matter of insuring the most complete and appropriate marshalling of the Agency's competencies in this field will be kept under continuing review. 50/

1. Office of Scientific Intelligence (OSI)

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The integration of OSI into the DD/S&T was effective 5 August 1963.\* The DD/S&T acquired [redacted] on the Headquarters T/O and [redacted] personnel from DD/I. 25X1 At Mr. Cline's insistence, [redacted] were retained by DD/I 25X1 in order to man his Collection Requirements Staff. Also acquired was responsibility for administrative support along with the Chairmanships of the USIB's Guided Missile and Astronautics Intelligence Committee, Joint Atomic Energy Intelligence Committee, and Scientific Intelligence Committee. Dr. Donald F. Chamberlain, previously Chief of the Atomic, Biological and Chemical Division, OSI, was named Assistant Director, OSI, effective 22 August 1963. Dr. Karl H. Weber continued in his position as Deputy Assistant Director

\*Appendix A, Tab 10.

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for Production, OSI, and on 1 October 1963, Mr. Carl E. Duckett was appointed Deputy Assistant Director for Collection, OSI, on a temporary basis, also assuming the Chairmanship of GMAIC. He was recruited by Dr. Wheelon specifically to chair the GMAIC, as well as to head up FMSAC, once that office was established.

Dr. Chamberlain was one of those who favored the transfer of OSI to the DD/R, and he had written to Dr. Scoville in February 1962

The DD/R must seek to be an intelligence producing organization, in addition to collecting and processing raw information. To decide otherwise, it seems to me, would be a complete negation of efforts over the past years by OSI to bring collector and producer closer together... Certainly all our experience of the last several years indicates that the intelligence cycle depends on the closest integration of collector and analyst. Our experience also casts doubt on the possibility of achieving real integration except under one head. 51/

Once the transfer of OSI had taken place, the DDCI, General Carter, laid down guidelines for the working relationship between the DD/S&T and the DD/I, noting that it was essential that the organizational change which had been effected should enhance the free flow of basic intelligence information and exchange of substantive views between the two Directorates at all levels. Over-all responsibility for production and publication

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of finished intelligence and its dissemination outside of CIA was to remain with the DD/I, and while the DD/S&T carried the basic responsibility for production and publication of scientific and technological intelligence, dissemination outside of CIA would require prior DD/I coordination. The DD/I, on the other hand, had the responsibility to coordinate all finished intelligence incorporating scientific and technical material with the DD/S&T prior to its dissemination outside CIA. That directive, dated 30 October 1963, is still in effect.\*

The Inspector General's Staff made a survey of OSI in the summer of 1964 and reported with regard to OSI staff attitudes toward their removal from the DD/I

OSI is not yet over the shock of the transfer of its subordination from the DD/I to the DD/S&T. Almost without exception, OSI professionals, who volunteered comment, believe that scientific intelligence production could be carried out more effectively if OSI were within the Directorate of Intelligence. We do not think it appropriate to re-examine at this time all of the pro's and con's of OSI's location in one directorate or another. The decision to place OSI in the DD/S&T was not lightly made, and OSI has had less than a year of experience in living with its new chain of command--too little to permit a valid assessment of the soundness of its subordination. 52/

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\*Appendix A, Tab 15.

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Seventeen recommendations were made by the IG report, the majority of which related to organization, staffing, career management, and supervisory problems. Only three or four related to the quality of S&T intelligence production. A statement in the report also noted that it was too early to assess the effect of the transfer on CIA's S&T intelligence production.

OSI has continued to carry the responsibility for the production and publication of DD/S&T's intelligence information for more than six years now, and despite the earlier dissatisfaction and friction, there are now well-established working relationships with all levels of the DD/I in carrying out the important function of production of intelligence.

A detailed history of OSI from its inception through 1967, prepared by Dr. Karl H. Weber, Deputy Director, OSI, is on file in the Office of the DD/S&T.

2. Office of Computer Services (OCS)

Prior to the formation of OCS in August 1963, the Agency's computer activities, initiated in 1950, had been vested in the Automation Staff of DD/I and the Management Staff of DD/S, later being merged into the Automatic Data Processing Staff (ADPS) under the DD/S.

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ADPS was charged with establishing a computer center, using IBM 1410/1401 equipment; carrying on Project CHIVE (a joint OCR/OCS project to apply computer techniques to the upgrading of the central reference facilities of the Agency); technical supervision of the ADP Division of the Comptroller's Office; and general electronic data processing for CIA as a whole.

When the DD/R was being set up in February 1962, Colonel Giller, Assistant DD/R, reviewed the use of computers and the ADPS activities being carried out on behalf of DD/P, DD/I, and DD/S. He concluded that the DD/R had only a minor interest at that time, although if a requirement developed for a sophisticated, special purpose computer for which the Agency would finance research and development, then the DD/R should be responsible.

The Kirkpatrick-Schuyler report of April 1962 recommended that the ADPS remain under the DD/S inasmuch as it was a support mechanism, but strongly recommended that the DD/S in consultation with other Deputies concerned, direct the ADPS to pursue aggressively the objective of automation in the Agency in such a way as to ensure the ultimate compatibility of automatic data processing systems throughout the Intelligence Community.

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When Dr. Wheelon was giving consideration to taking on the job of DD/S&T in the summer of 1963, the need for computer services had already arisen in OSA in connection with satellite programming as well as in the A-12 manned aircraft project. Dr. Wheelon and Mr. McCone both believed all Agency computer assets should be consolidated into one center, and that it should be placed under the direction of the DD/S&T. At the time of the 5 August 1963 reorganization, therefore, the ADPS was transferred from the DD/S and became the Office of Computer Services. Mr. Joseph Becker was appointed as Assistant Director for Computer Services, DD/S&T, effective 16 September 1963.\*

The Automatic Data Processing Division of the Office of the Comptroller was added to OCS effective 18 November 1963. The integration of the two groups of personnel and equipment required the professional services of an outside management firm which was contracted in July 1964 to organize OCS for maximum servicing of the Agency's automatic data processing.

The outlook for increasing use of computers by CIA was forecast by Dr. Wheelon early in 1966

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\*Appendix A, Tab 13.

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in view of the requirement to analyze and evaluate increasing volumes of collected data.

...The evaluation of secret intelligence data and overt information is our principal responsibility; and is frankly the most difficult to relate to specific technologies. It involves the collation, correlation and distillation of vast quantities of raw data from all sources, covering topics which range from economics to politics and back to basic science. It is here that technology may make its greatest contribution since we are collecting raw data faster than we can adequately evaluate it, and the difference grows steadily. The solution lies somewhere in the use of computers, ADP techniques, and a better understanding of our own existing distillation process. The evaluation of increasingly large volumes of photography is just one painful example of this data explosion and indigestion problem. 53/

3. Foreign Missile and Space Analysis Center  
(FMSAC)

Late in 1962, Mr. McCone and members of his staff began discussions with the Department of Defense concerning the possibilities for improving the analysis and interpretation of data on foreign missiles and space activities. There was general dissatisfaction with the results currently being obtained from the various agencies involved in collection and analysis of this data. A proposal developed out of these discussions for a Missile and Space Technical Intelligence Center (MISTIC). This concept, looking toward a national capability with

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joint participation of all agencies concerned, was further discussed through the spring of 1963 by representatives of CIA, DOD, DIA, and NSA, but the jurisdictional problems involved in such a venture seemed, to some, to be insurmountable.

Mr. McCone was quite anxious that the MISTIC proposal be carried out regardless of what agency might eventually inherit the organization and he therefore, in April 1963, directed Dr. Wheelon (then AD/SI, and also Chairman of GMAIC) to pursue the matter. A proposal put forward by the AD/SI recommended that a center be operated under the DCI's authority with the purpose of providing coordinated tasking of U.S. assets for optimum performance in collection and reduction of technical data on foreign missile tests and space events, and to use the improved collection/analysis system for production of timely intelligence reports for GMAIC, USIB, and the Intelligence Community generally. In order to avoid procedural delays in setting up such a center through USIB action, it was recommended that an Executive Order be sought from highest authority.

No action was taken on the proposal for several months. Dr. Scoville resigned from the post of

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DD/R and Dr. Wheelon moved up to reorganize the Directorate. Mr. McCone meanwhile informed Under Secretary of Defense Gilpatric of the intended initiation by CIA of a missile and space intelligence center, and on 2 August Dr. Wheelon met with Dr. Eugene Fubini of Defense Research and Engineering and outlined the scaled-down CIA plan for an analysis center with complete CIA funding and technical control within its regular budget as a service of common concern to the whole Intelligence Community. 54/

The general consensus of the meeting was that CIA should establish an all-source analysis capability since this would not duplicate any activity in being but would fill an existing void. Dr. Wheelon put his understanding of the sense of the meeting in writing to Dr. Fubini on 23 August 1963: that CIA with community support would proceed incrementally in creating the missile analysis organization and that further discussion of a parallel collection function would be delayed until the analysis activity was a working reality. Mr. Carl E. Duckett was expected to enter on duty at CIA, leaving his current job as Director of Missile Intelligence at Redstone Arsenal about 1 October 1963, and would size up the task, after which further implementation would be effected. 55/

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Mr. McCone on 21 October 1963 signed the directive setting up the Foreign Missile and Space Analysis Center and on 7 November 1963 [ ] announced the formal establishment of the Center and the appointment of Mr. Carl E. Duckett as Director of FMSAC. The appointment of Mr. David S. Brandwein of Space Technology Laboratories as Deputy Director was approved by the Executive Director on 2 December 1963.

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FMSAC became operational on a 24-hour basis on 1 March 1964 and by 1 May 1964 was operating with a staff [ ] Effective 25 October 1965, the missions, functions, and analytical responsibilities of the Ballistic Missiles and Space Division of OSI were transferred to FMSAC.\*\* After this merger FMSAC had a staff of approximately [ ]

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#### 4. Office of the DD/S&T: Staffs

The support staff under the DD/R in 1962-63 had included administrative, security, personnel, career

\*Appendix A, Tab 16.

\*\*Appendix A, Tab 39.

\*\*\*A comprehensive history of FMSAC is currently (1972) in first draft.

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and logistics personnel. The former Special Requirements Staff of DPD (consisting of the Chairman and Secretariat of the Committee on Overhead Reconnaissance, COMOR) had also been transferred to the Office of the DD/R with

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[ ] Chairman of COMOR, being named Special Assistant (COMOR) to the DD/R. The COMOR Secretariat remained a part of the Office of the DD/S&T, also, until 1 July 1967, when the Committee was reconstituted as the Committee on Imagery Requirements and Exploitation (COMIREX) under USIB, and the Chairman and his staff were transferred to the DD/I's jurisdiction for administrative support.

The personnel authorization for the immediate Office of the DD/R had been set at [ ] for Fiscal Years 1964-65. With the reorganization under Dr. Wheelon this number was deemed inadequate for the scope and depth of the responsibilities he had undertaken. No allowance had been made for staff officers to assist him in the guidance, coordination, planning and review of substantive activities. Advice was obtained concerning the ratios of staffs to operating components in other Directorates, and an increase of [ ] was requested to man the following new staffs:

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a. Plans and Programs Staff, [ ]

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[ ] Chief. This staff was responsible for overseeing

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development of the annual budget and operating programs of the operating components, and for insuring the closest collaboration and coordination between current and proposed activities and most efficient utilization of monetary and personnel allowances. It also served as the administrative point of reference for external research components of the DD/S&T.

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b. Systems Analysis Staff, [ ]

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[ ] Chief. This staff consisted of a small group of highly qualified officers able to study and conduct theoretical tests on proposed technical collection devices, and to analyze failures and inadequacies in current systems and devices. It worked closely with consultants, advisers and contractors to develop new system designs. Members of this staff were active in support of the Agency's satellite reconnaissance activities and out of SAS came the nucleus of the group which later formed the Office of Special Projects. The residual SAS staff was transferred in June 1967 to the National Intelligence Programs Evaluation Staff (NIPE).

c. Action Staff, [ ]

Chief.

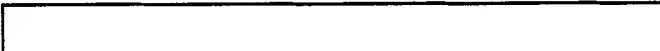
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The Action Staff was designed by Dr. Wheelon to furnish the DD/S&T a quick reaction capability for answering immediate information requests, and to represent the operating

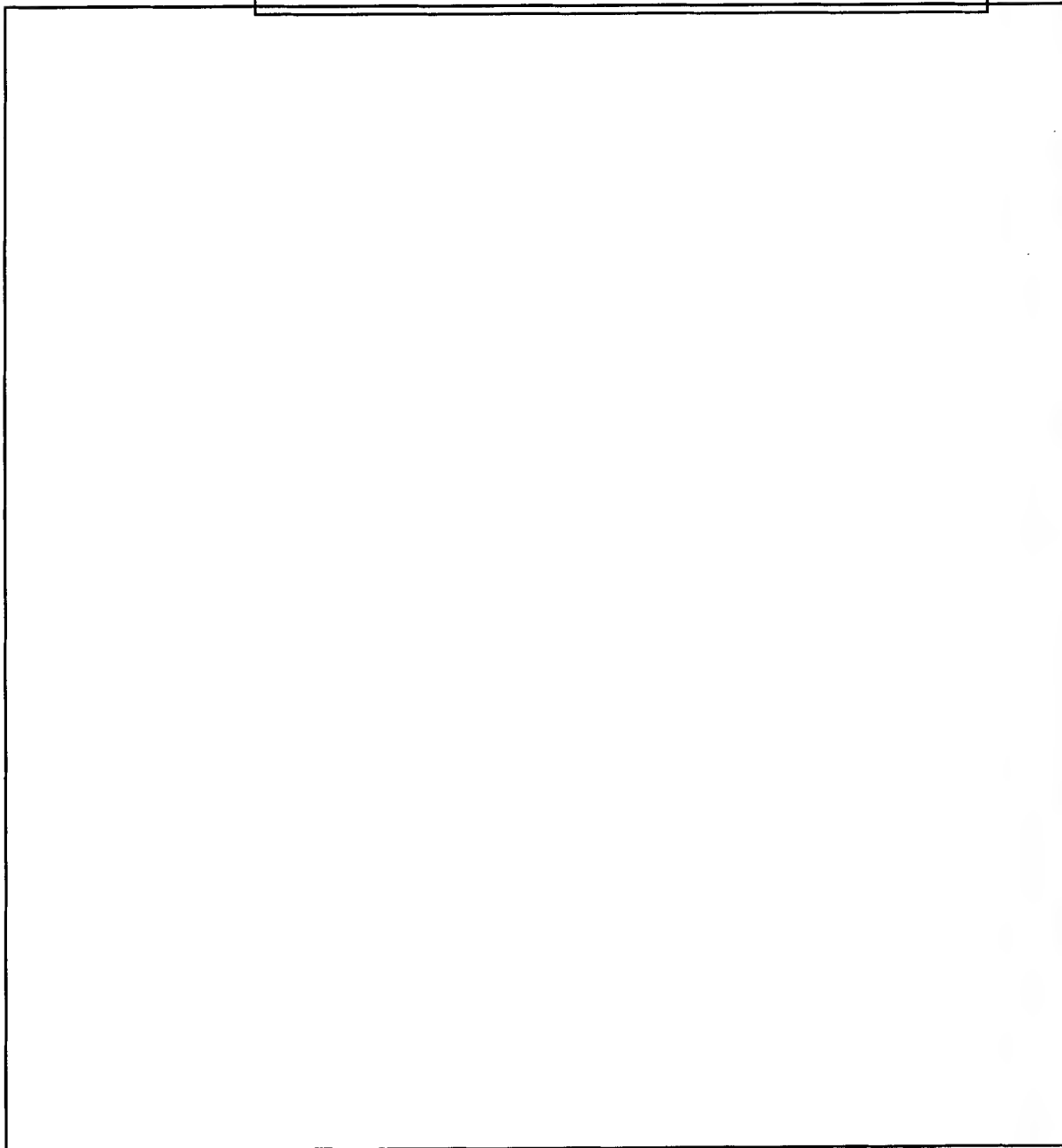
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components of DD/S&T on matters of collection and  
requirements. 

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d. Spint Staff, [REDACTED]

Chief. On 4 November 1963, [REDACTED] in his capacity as CIA Sigint Officer, was transferred from the DD/I and named Special Assistant to the DD/S&T, as well as Chairman of the USIB Watch Committee.\* On 21 April 1964 the Executive Director ordered the transfer of the Agency Spint Staff to the jurisdiction of the Sigint Officer under the DD/S&T, and this was accomplished effective 9 July 1964.\*\* The Spint Staff was disestablished as of 2 February 1970 and its functions were split up among the CIA Sigint Officer, the Intelligence Requirements Staff of DD/I, and the Office of Security.\*\*\*

The organizational structure of the DD/S&T was completed at the end of 1963 insofar as acquisition or formation of new offices was concerned, and changes occurring since then have been through assignment of new projects, growth of activities in being, or internal reorganizations, such as the separation of satellite reconnaissance activities from OSA and the establishment of a separate Office to manage those activities.

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\*Appendix A, Tab 18.

\*\*Appendix A, Tab 23.

\*\*\*Appendix A, Tab 61.

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5. Office of Special Projects (OSP)

The last major office to be set up under the DD/S&T, effective 15 September 1965, was the Office of Special Projects.\* Mr. John J. Crowley was named Director, and Mr. John N. McMahon was named Deputy Director. This Office, as indicated above, did not represent a new activity but resulted from the splitting away from OSA of the satellite reconnaissance activities, which had developed over the previous five years into the most prolific source of photographic intelligence information CIA had ever developed. In order to facilitate the management of the program assigned to CIA under the NRP, it was decided to compartment the two separate and distinct activities—the manned aircraft reconnaissance projects, and the unmanned satellite reconnaissance projects. This was accomplished in two stages: first, the majority of the members of the Systems Analysis Staff of the DD/S&T's Office were shifted to form the nucleus of a Special Projects Staff charged with responsibility for consolidating the various satellite-oriented activities of the Directorate into one office; second, personnel from OSA assigned to satellite

\*Appendix A, Tab 37.

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activities, including detailees to the Pentagon and the field, were transferred to SPS and, once the new NRO Agreement of 13 August 1965 was signed, assuring CIA's role in the NRP, this combined group was reorganized as the Office of Special Projects.

An agreement was reached on 1 October 1965 governing the transfer of resources, responsibilities, and authorities from OSA to OSP, and setting out the direct support which OSA would render to OSP in the functional areas of financial operations, communications, registry and courier services, travel arrangements, logistics, and computer services. A period of adjustment was necessary before OSP could build up its capabilities to assume complete management responsibilities for all phases of the satellite reconnaissance program. 56/

The relationship of OSP to the National Reconnaissance Program, under which its projects are financed and directed, is treated in some detail in Chapter V of this history.\*

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\*See pp. 285-291, below. A separate history of OSP and its four major projects, covering CIA satellite activities from 1958 to 1970, was completed in March 1972 and is in process of being edited for publication.

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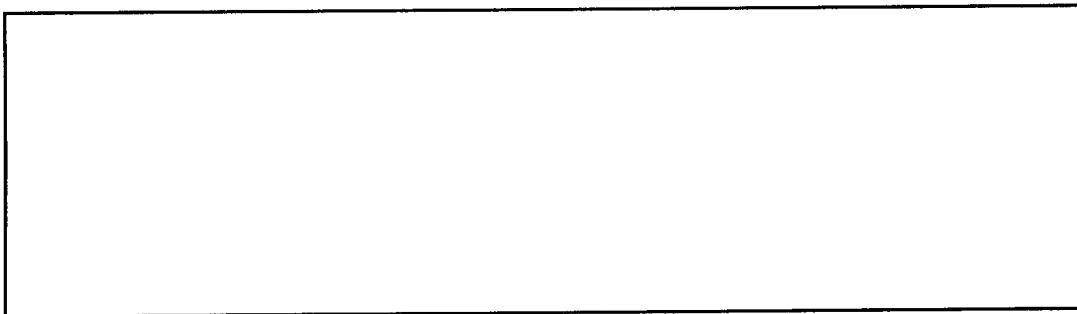


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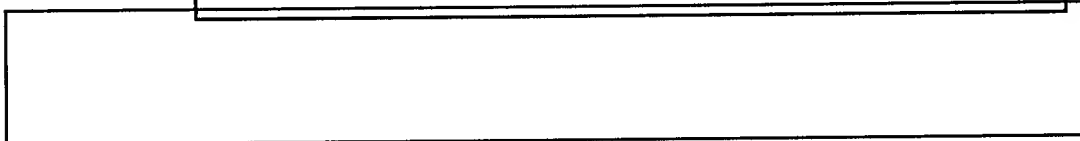
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The airborne collection activities of CIA subsequent to 1962 were blanketed under the National Reconnaissance Program and funds for their operation were budgeted through the Defense Department. While the day-to-day management of the field installations supporting these programs remained with OSA, OEL, and later OSP, the funds required to maintain them depended on the continuation of the airborne collection programs. Dr. Wheelon, from 1963 to 1966, played a vital role in preparing the justifications for these programs, and presenting them convincingly in high level briefings, making excellent use of effective graphics and other visual aids.

A short history of each of the facilities inherited by the DD/S&T, as well as those developed during Dr. Wheelon's tenure, can be found in Appendix E to this history.

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C. Board, Committee and Panel Structure

1. Research and Development Review Board

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On 16 April 1963 [REDACTED]

announced the establishment of a Research and Development Review Board for the purpose of reviewing and integrating research and development activities and scientific and technical efforts in the various Agency components concerned, and to ensure that all scientific and technical activities were constantly related to the broadest interpretation of the Agency's mission. The Board was also to constitute a reviewing body for the Agency's research and development effort as a whole, and was to provide an effective internal mechanism for discussion and implementation of recommendations of the Scientific Advisory Board, once that body was established.

Membership of the R&D Review Board at the time of its initial meeting on 17 May 1963 was as follows:

Deputy Director of Central Intelligence, Chairman  
Deputy Director, Research  
Chief, Technical Services Division, DD/P  
Director of Communications, DD/S  
Assistant Director for Scientific Intelligence, DD/I  
Director, National Photo Interpretation Center

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When Dr. Wheelon was named DD/S&T in August 1963, he was also named Chairman of the Research and Development Review Board, vice the DDCI. It was Dr. Wheelon's desire that all Agency R&D should be coordinated by the DD/S&T, and he had been led to believe, in his discussions with the Executive Director in July 1963, that this would be the case. 57/ However, the other Directorates involved were anxious to retain certain of their R&D functions under their own operational or user components, and they continued to do so in the absence of any further directive to the contrary.

The Research and Development Review Board thus did not assume the role of coordinator of all CIA R&D, but acted more as an arbiter of ad hoc compromises among the various components. Central coordination of R&D was not achieved during Dr. Wheelon's tenure, but agreement was finally reached on 17 July 1967, when [redacted]

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[redacted] giving that authority to the DD/S&T.\*

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The Research and Development Review Board went out of existence when the new "Coordination of Research, Development and Engineering" agreement came into effect.

\*See Chapter IV, pp. 145-155, below.

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2. External Advisory Groups

The PFIAB's 8 March 1963 recommendations for strengthening technical capabilities in the Intelligence Community urged a major effort to draw fully upon the most advanced science and the best scientific brains in the nation. Mr. McCone had the same purpose in mind when in April 1962 he had asked for an advisory board of eminent scientists to be established to advise him; however because of the delay in carrying through the plan to bring all of the Agency's scientific activities together under the DD/R, the advisory group did not materialize until July 1963.

The formation of the Scientific Advisory Board was announced by [redacted] dated 16 July 1963. The Board was to be responsible for reviewing and advising the Director on the total scientific functions of the entire Agency, replacing the former CIA Research Board which had been responsive principally to the specialized needs of the Clandestine Services. Dr. August B. Kinzel, Vice President for Research of the Union Carbide Corporation, was appointed Chairman of the

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\*Appendix A, Tab 9.

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Board, and several other outstanding men of science and industry agreed to serve.\*

By the time the Board was organized and held its first meeting on 9 September 1963, the DD/R had been reorganized and Dr. Wheelon, as DD/S&T, became responsible for the administrative support and guidance, and for the substantive follow-up on the Board's work, as well as for the several expert panels which had been set up in 1962-63 to deal with specialized S&T problem areas, such as Soviet and Chinese Communist nuclear activities, Soviet guided missile and space developments, overhead reconnaissance, optics, and life sciences.

The end-of-the-year report to the PFIAB by Mr. McCone on 13 December 1963 made note of the Board's establishment as follows:

A most important measure recently taken to accomplish the interfacing of the U.S. storehouse of scientific knowledge and intelligence was the activation of the Agency Scientific Advisory Board. The impressive array of senior U.S. scientists who have accepted assignments on this Board are meeting at regular intervals to review our present status and needs and to offer guidance and direction. In addition to the benefits derived from Board appraisals of our approaches and activities there is a "fall-out" of suggestions and offerings by

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\*Terms of reference and membership of this Board, and other advisory groups mentioned in this Chapter will be found in Appendix F.

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each member based on his comprehensive knowledge of the state of the art across a broad frontier of scientific discoveries and developments. These ideas are fed into the administrative pipeline for further development either by referral to the Agency Research and Development Review Board or to the Office of Research and Development. 58/

Despite this optimistic report on the Advisory Board's functions, and the unquestioned scientific competence represented among its members, the Board did not contribute as greatly to advising on the formation and direction of the Agency's research and development programs as Mr. McCone and Dr. Wheelon would have desired.

Dr. Wheelon felt there was a need for a small, very senior group to provide the DCI with an integrated opinion of the Agency's R&D effort; however, only one or two of the Kinzel Board were broad gauge enough, in Dr. Wheelon's opinion, for the larger role he had in mind. The Kinzel philosophy of age diversity and high specialization in the membership of his group was more appropriate, Dr. Wheelon felt, for a technical panel and the Kinzel Board members should be contributing largely to such panels. Dr. Wheelon noted to Mr. McCone in December 1963 that

...By its own design and selection, the Kinzel Board is a mixed bag spanning all ages and

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disciplines with eight men. While each of its members is extremely competent, it is not a group to whom one can subordinate the Purcell Panel, the Hyland Panel, the Webster Panel, the Roddis Panel, the Stern Panel, or the Covert Instrumentation Panel...In order to attract the caliber of personnel necessary to give these special panels the expertise required, it is necessary that they understand in a real way that they are working directly for the DCI. The Chairman of each Panel should have considerable latitude in selecting his own members without regard to the Kinzel Board. 59/

Dr. Wheelon said he would continue to work with the Kinzel Board and the Research and Development Review Board to identify the topics needing to be covered, then form specialized panels as indicated. Once those panels were established and operating, the question of the role of the Kinzel Board would need to be settled. 60/

Consideration was given in October 1964 to enlarging the Kinzel Board and possibly extending its role to cover over-all S&T responsibilities of the whole Intelligence Community, but there was doubt among the participants as to the wisdom of such a move and as to the usefulness of such a community-wide S&T advisory group. It was left that the Board would continue under its original July 1963 charter for a second year.

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On 19 July 1965, Dr. Wheelon held a meeting of his Office Directors to discuss a proposal to restructure the set-up of S&T boards and panels advisory to the DCI. He outlined a proposed reconstitution of the existing expert advisory panels, and agreement was reached that (1) all panels would be co-equal in stature, appointed in the name of the DCI, and that there would be neither a senior board nor a senior single scientific adviser to the DCI; (2) eleven functional panels were recommended, nine relating to activities of the DD/S&T, and one each to those of the DD/P and the DD/S, as follows: 61/

DD/S&T:     Space  
              Strategic Capabilities  
              Nuclear  
              Basic Science & Technology  
              Radio Physics, Electronics  
                  and Countermeasures  
              Life Sciences  
              Optics  
              Computation and Analysis  
              Audio and Counter-Audio

DD/P/TSD:   Covert Instrumentation

DD/S/O/C:   Communications

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The Kinzel Board's tenure was allowed to lapse after two years in being, and [ ] which had set it up [ ] was canceled in November 1965 on the instruction of the DD/S&T. New or reconstituted panels organized by Dr. Wheelon and his staff have operated

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since 1965 under the restructured system, including: Strategic Weapons Intelligence Panel, Space Intelligence Panel, Nuclear Intelligence Panel and Science and Technology Panel. It was found in the various areas of the life sciences that a more useful means than a formal panel for obtaining the expert advice required was through individual consultations with the experts on particular and widely divergent subjects. Therefore the Life Sciences Panel ceased to meet as a formal group.

### 3. USIB Committees

At the time of the transfer of OSI to the DD/S&T in August 1963, guidelines laid down by the DDCI, General Carter, for changes in responsibilities due to the transfer, included the following directive with regard to the DD/S&T's relationship to USIB:

The DD/S&T will act as the immediate link between the DCI and the USIB scientific committees, GMAIC, JAEIC, and SIC, while recognizing that these committees are elements of USIB and are not subordinate to either DD/I or DD/S&T. The DD/S&T will take the initiative in preparing briefing memoranda and position papers for the DCI on matters arising out of those committees, and will coordinate such matters with the DD/I.\*

The DD/S&T acquired the Chairmanship of the Guided Missile and Astronautics Intelligence Committee

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\*Appendix A, Tab 15, para. 10.

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in August 1963 when OSI was transferred from the DD/I. Dr. Wheelon had previously served as Chairman while he was AD/SI (August 1962 to October 1963) and he continued to play an active and influential role in the Committee's work, which was in the field of his own specialization. The OSI staff continued to have the major responsibility for support of the Committee on behalf of the DD/S&T until FMSAC was established. The first FMSAC Director, Mr. Carl E. Duckett, was appointed Chairman of GMAIC in October 1963 and served until October 1966, when the Chairmanship passed to the Pentagon for two years. In 1968 it reverted to the DD/S&T's control with the appointment of Mr. David S. Brandwein, the second Director of FMSAC, as Chairman.

The Chairmanship of the Joint Atomic Energy Intelligence Committee was also acquired, along with OSI, by the DD/S&T. The Nuclear Energy Division of OSI continued to be responsible for the DD/S&T's contribution to the support of the Committee's work. Dr. Chamberlain, Director of OSI, has continued to serve as Chairman of JAEIC since 1963.

The Scientific Intelligence Committee of USIB has also been supported by the OSI staff, and has

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been chaired on behalf of the DD/S&T since 1963 by Dr. Karl H. Weber, Deputy Director of OSI.

The DD/S&T's relationships with the above three USIB committees are fully described in the related appendices of the OSI History, and of the FMSAC History.

25X1 The Chairmanship of the Sigint Committee of USIB has also been a responsibility of the DD/S&T from time to time since it was transferred from the DD/I in 1965. [ ] while Special Assistant to the DD/S&T, served as Chairman from 4 February 1965 to 20 May 1966, when both the incumbent and the position were moved to the Office of the Director. The Chairmanship reverted to the Office of the DD/S&T on 1 October 1969 with the appointment of [ ] to succeed [ ] 25X1

25X1 The Chairmanship and Secretariat of the Committee on Overhead Reconnaissance (COMOR), acquired by the DD/R in July 1962 from DPD (where it had first been established as an ad hoc requirements committee to support the U-2 program), passed to the DD/S&T in August 1963. [ ] served as Chairman during all of this period and until September 1965, when [ ] succeeded him. In July 1967, 25X1

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after Mr. Duckett became DD/S&T, COMOR was reconstituted as the Committee on Imagery Requirements and Exploitation (COMIREX), and was transferred to the aegis of the DD/I for administrative and secretariat support. Very close relations have been maintained by the DD/S&T with this Committee throughout its existence since it has been the body responsible for placing requirements against the Directorate's overhead photography collection programs, both manned and satellite.

#### 4. White House Committees and Boards

Presidential advisory boards and committees dealing with scientific and technological activities have had a tremendous influence on the affairs of the DD/S&T, a prime example being in the very organization and composition of the Directorate, as recommended by the President's Foreign Intelligence Advisory Board.\*

The President's Science Advisory Committee (PSAC) has also tasked the DD/S&T from time to time for reports and studies of mutual concern, and has made recommendations concerning the Directorate's activities. The Land Panel of PSAC (inaugurated in July 1965) during the tenure of Dr. Wheelon as DD/S&T had a direct influence on

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\*See Chapter II, pp. 42-46, above.

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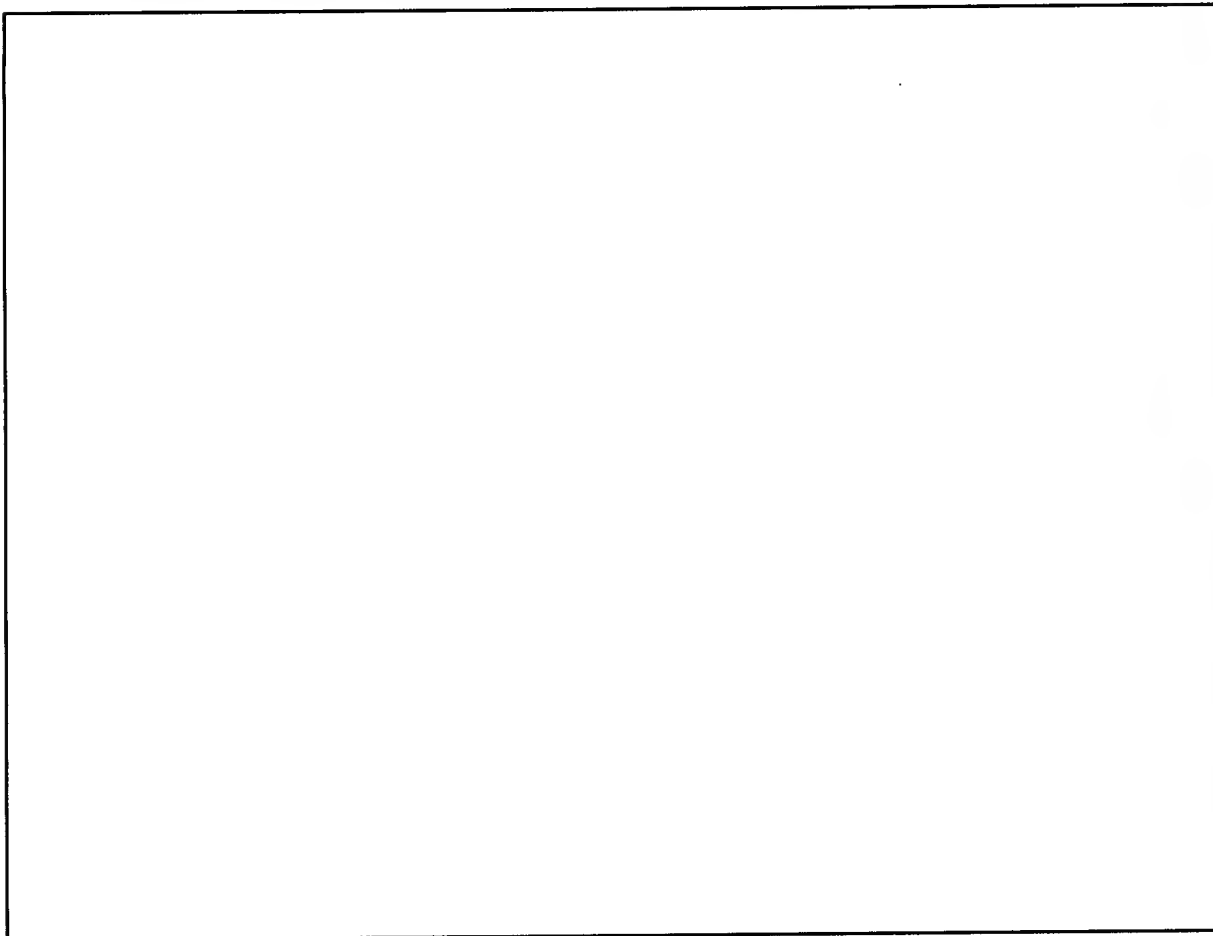
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the CIA share in the management of the satellite reconnaissance program under the NRP, which the Land Panel was set up to oversee.

The National Security Council issued a good number of directives and memoranda during Dr. Wheelon's term as DD/S&T which required his participation and that of his staff in preparing position papers and following through in some cases with programs. Notable among these were:

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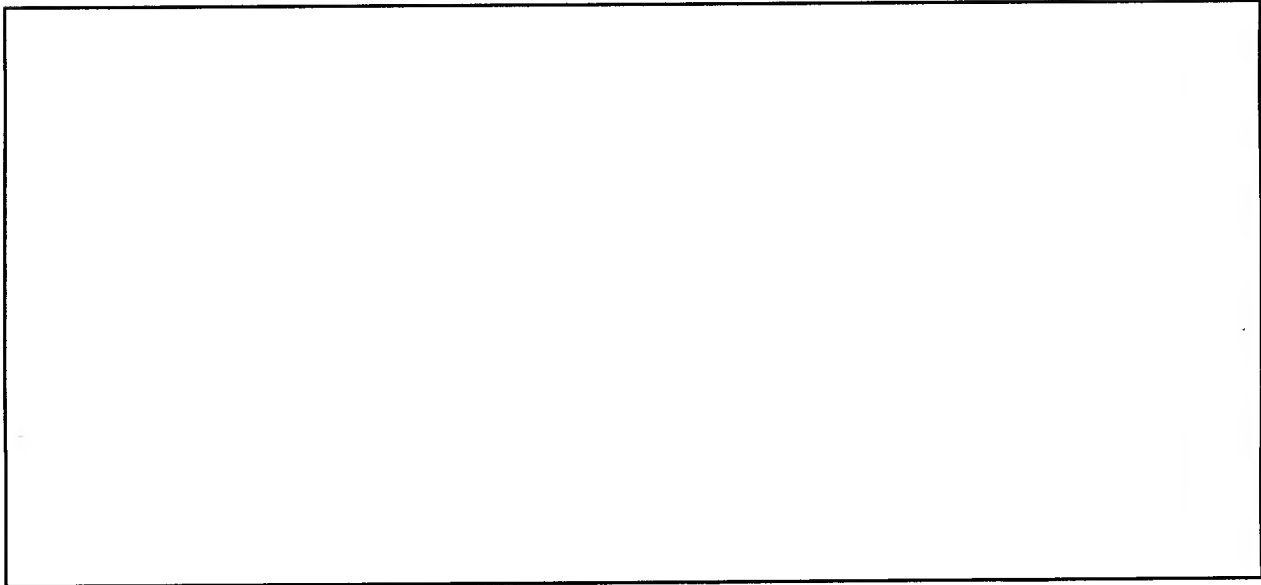


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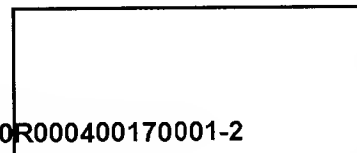


A continuing relationship between the DD/S&T and the National Security Council has been in the participation by the DD/S&T in the activities of the "Special Group" established under NSC 5412 in 1955, later called the "303 Committee," which considered and passed on the acceptability of "black" activities proposed by CIA. In this group the DD/S&T has had the responsibility to support the DCI, or to act for him when appropriate, in presenting and defending the operational overflight programs of OSA, OSP, and OEL (under the NRP) in order to gain high level approval for the actual launching of collection missions; also to recommend to the DCI the approval or disapproval of the monthly overflight schedule proposed to the 303 by the Joint Reconnaissance Center of the Joint Chiefs of Staff.

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D. Management of the Directorate Under Dr. Wheelon

1. Functional Organization: Priorities

In the first year-end report to the White House following Dr. Wheelon's appointment as DD/S&T, Mr. McCone reported to Mr. McGeorge Bundy with regard to PFIAB's recommendations of 8 March 1963 that the majority of the recommendations for strengthening the Agency's technical capabilities were now in process of being carried out. He noted that there were still many problems inherent in the recruiting of suitable top-flight scientists to man the new Directorate, including problems resulting from budgetary restrictions. 62/

Dr. Wheelon, in a 4 February 1964 memorandum to the Executive Director, pointed up the budgetary problem he was facing in trying to make assumptions for future year DD/S&T planning, and said

In FY 1964 and 1965 our planned growth is seriously interrupted and forward-looking action deferred, because of restrictive personnel and funds limitations. I appreciate that all Directorates have had similar restrictions on funds and personnel, but this becomes a more serious hurdle in a Directorate as newly organized as the DD/S&T. Unlike the old line Directorates which are restricted to doing a little less of the same thing, the DD/S&T finds itself denied the capability to get a fair start in many areas of research I feel are of the utmost importance in creating a balanced organization. 63/

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In March 1964, Dr. Wheelon reported to the DCI on current progress in manning the Directorate and included a functional chart showing the areas in which the various Offices of the DD/S&T were concentrating their efforts. He said he conceived of the product of scientific and technological intelligence as

...a continuous stream beginning with the clear understanding of the requirements, the basic research and preliminary design of collection systems, the development of those systems, their operation..., the data reduction of their results, the engineering analysis which converts scientific data into English appraisals, and finally, the estimative step which draws the estimative judgments from these analyses. 64/

He furnished the DCI an organizational chart of the Directorate as then organized, and a functional chart illustrating the various stages of the continuous process in which each Office of the Directorate carried out its functions in coordination with the others. Dr. Wheelon said that the greatest benefit of having all of these functions under the same roof was that he could "close the loop" between the various steps in the process of producing scientific and technological intelligence. (The functional and organizational charts referred to are reproduced, overleaf, Figures 2 and 3.)

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(March 1964)

# DD/S&T FUNCTIONS

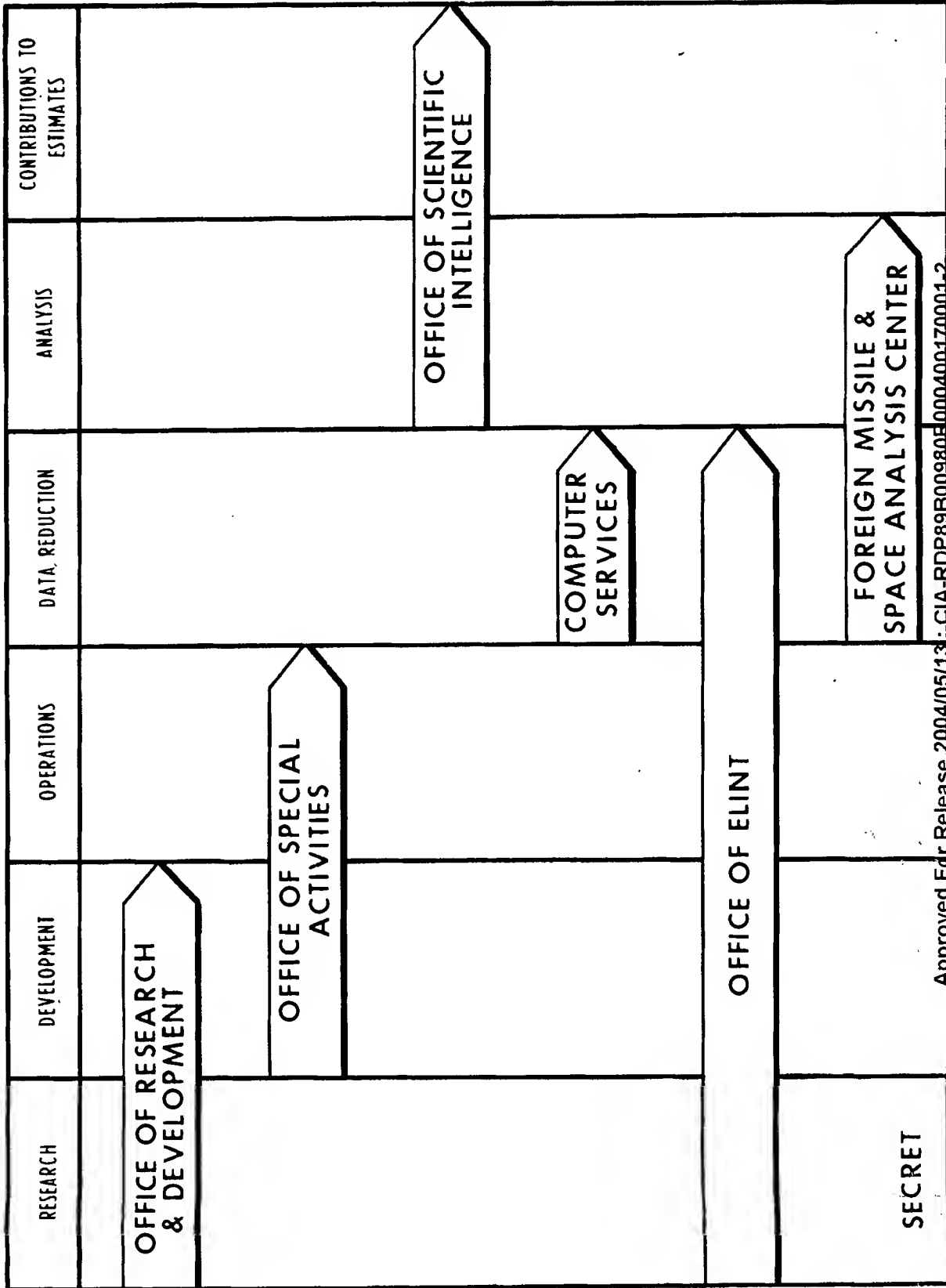
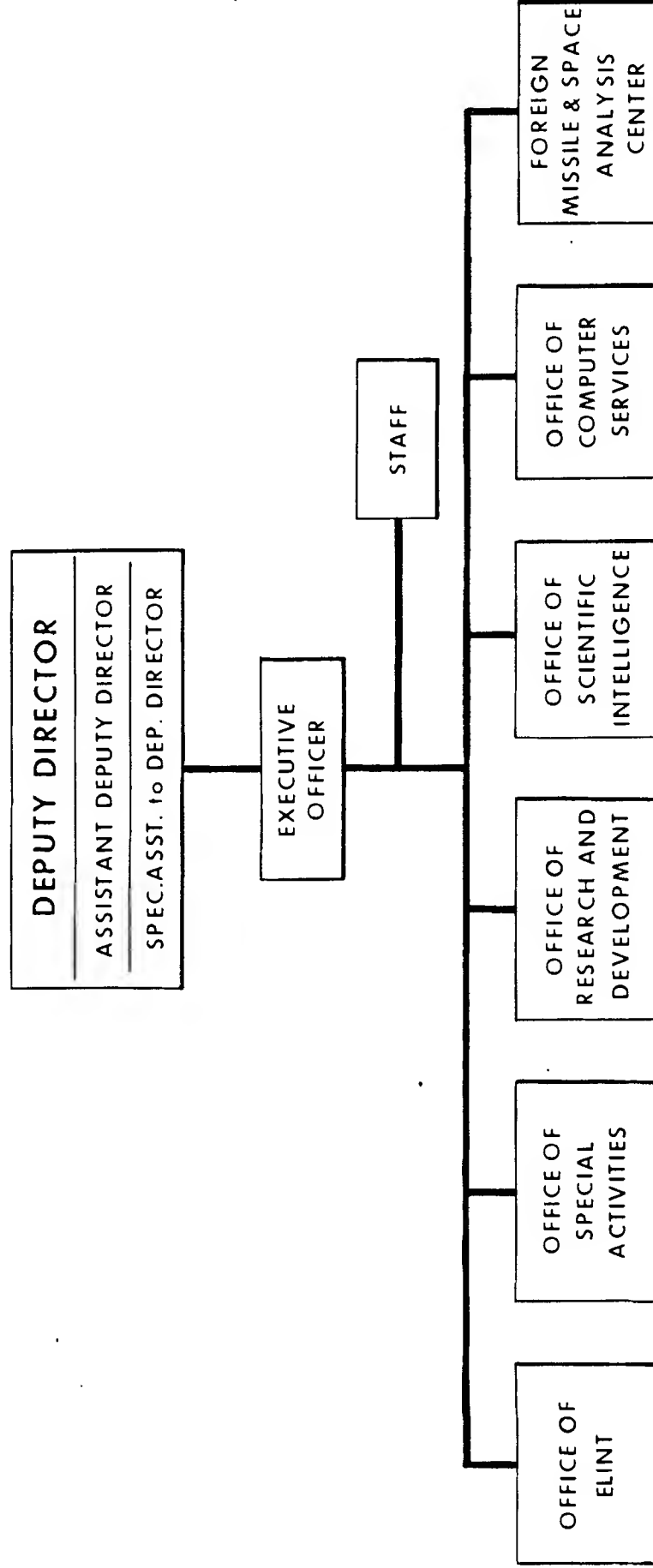


Figure 3

## DEPUTY DIRECTORATE FOR SCIENCE AND TECHNOLOGY



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March 1964

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Within the functional organization of the Directorate the establishment of priorities among the areas of activity was controlled in the first instance by the requirements levied by USIB and higher authority. Since the priority demands for intelligence in the national security area have been, and continue to be, for information on Soviet missiles, nuclear weapons, and naval build-up, and on Chinese Communist nuclear activities, the DD/S&T's production of intelligence has been aimed principally at satisfying those demands.

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Beyond those activities governed by priority requirements, the emphasis assigned by Dr. Wheelon to specific programs was necessarily subjective to a degree. Some collection operations could be precisely defined and carried out, such as the collection of information on specific Soviet missile firings. Choices among other operations had to be made on a judgment of their comparative contributions to national security, or alternately, the consequences if they were not done, keeping in mind that the operational phase of most S&T projects must be downstream from the time of decision by a number of years, and that the opposition, meanwhile, is not standing still.

As to priorities in the expenditure of his own time and effort, Dr. Wheelon gave a large portion of both to the advocacy in the NRP of CIA's research and development role in satellite reconnaissance, focusing strongly on future technical collection systems. These were high priority programs and the stakes were high. From time to time, Office Directors not associated with the NRP would become concerned at what seemed to them the undue amount of the DD/S&T's time given to NRP problems in comparison to their own. However, Dr. Wheelon was acutely aware of the importance of the work of all Offices of the Directorate.

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2. Philosophy of Management 65/

Since the Directorate for Science and Technology was a new entity in the Agency and its missions relatively unique, its management processes and practices had to be developed and implemented to serve its special needs, always with the best interests of the Agency and the Community in mind. Management tools such as computer-based reporting and systems analysis were introduced under Dr. Wheelon to ensure that complete and accurate information was available to him and his staff for monitoring project accomplishment, measuring results, and making timely and well-advised decisions.

While these management tools were being applied with varying degrees of success and modified as experience dictated, it was still vital that the Deputy Director maintain continuous and personal involvement in the whole spectrum of Directorate activities. This he accomplished through daily morning meetings with his key officers, who had previously been briefed in their own areas. Monthly reports were required of each Office, supplemented by communications and meetings on specific topics.

Within the Directorate's research and development activities, Dr. Wheelon instituted a review

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program in which quarterly critiques were held on each project underway in the Directorate. Office Directors and project officers briefed him in detail, progress and problems were fully analyzed, and follow-up actions were monitored at the Directorate level. These project reviews were later organized in accordance with the planning categories, sub-categories, and elements as set forth in the Combined Program Call (first issued in January 1966) to enable Directorate activities to be more closely aligned with established objectives.

External contract proposals were subjected to a thorough review at Office and Directorate level to relate them to requirements, and were coordinated with a view to avoiding unnecessary duplication of effort. A computer-based reporting system to provide monthly status summaries of all DD/S&T contracts was initiated. It did not reach its full utility during Dr. Wheelon's tenure, but did become a very useful management tool after two years of building a substantial base.

In the area of scientific intelligence production by OSI and FMSAC, Dr. Wheelon relied heavily on his morning meetings and the actual publications to keep current on new information and analyses, and to provide

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guidance on areas of analysis, research, or reporting which required increased or decreased emphasis. He continued to display the interest he had shown as AD/SI in improving the quality of analysis, and in weeding out non-productive people and projects.

The DD/S&T and his staff reviewed all scientific intelligence production, both Agency and external, and regular briefings by OSI and FMSAC on their proposed production programs provided Dr. Wheelon with a continuing opportunity to give direction to their efforts. The year 1964 saw an increase in publication of scientific intelligence by the Directorate, with FMSAC beginning its daily and special missile and space activity reports, and OSI initiating the Daily Surveyor and later a weekly version.

Analyses in support of National Estimates prepared by OSI and FMSAC were reviewed with Dr. Wheelon prior to USIB consideration. The Board of National Estimates, principal consumer of DD/S&T's major intelligence production, has been well satisfied with the quality and timeliness of the contributions received from the Directorate since its establishment.\*

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\*From a conversation in December 1970 between the writer and Mr. Abbott Smith, Vice Chairman, and later Chairman, of the Board of National Estimates, 1958-1970.

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The DD/S&T's operating responsibilities in the technical collection of Sigint and photographic intelligence were carried out by OSA, OSP, and OEL, and were monitored on his behalf during most of his tenure as DD/S&T by his Special Assistant, [ ] Dr. Wheelon kept fully informed on those activities through his daily meetings and frequent conversations with his Office Chiefs and [ ] A large part of his time and effort was spent in the advocacy of these programs in the various bodies concerned with the National Reconnaissance Program.\*

Reporting on his stewardship as DD/S&T to Admiral Raborn in February 1966, Dr. Wheelon wrote that there was opportunity for improvement within the Directorate, and his plan for achieving it was to apply a "closed loop" reporting and control system to the management areas of planning, organization, control and communications, so as to ensure that each operated in harmony and consistency with the other three. 66/

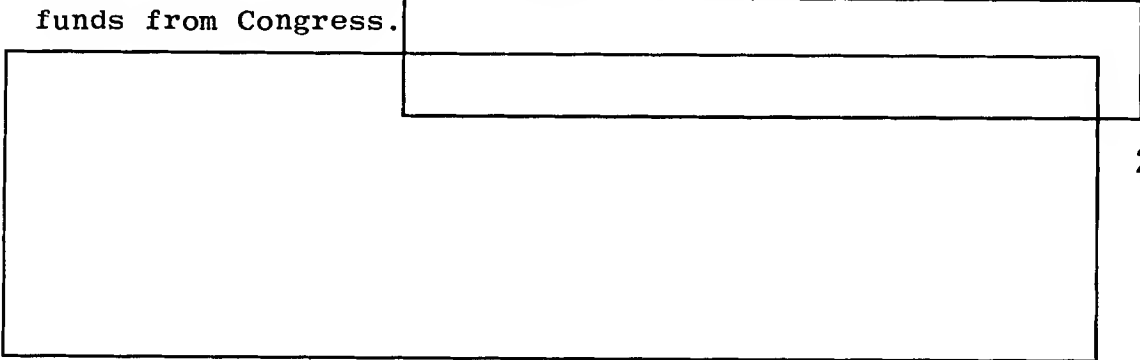
\*See Chapter V, pp. 244-290, below.

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3. Budgeting for DD/S&T Programs

Prior to the placing of all overhead reconnaissance activities under the management of the National Reconnaissance Program, CIA had budgeted for its share of these programs together with its other activities and had received obligational authority over the funds from Congress.



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The first Directorate of Research five-year projections (FY 1963-67) were prepared in answer to a call by the BOB and were to be used as a basis for preparing the FY 1964 budget. Two major phases in the process as outlined by the Director of the Budget were (1) a spring program review concentrating on major long-range issues, government-wide, through 1967, against which general guidelines and planning figures would be established in July; and (2) a summer and fall period of preparing and reviewing detailed budget estimates for FY 1964 in which the projections through 1967 would be used as background,

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but concentration would be on short-term decisions. 67/

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Budget hearings for FY 1965 opened with the announcement that the 1965 budget would be the tightest yet under President Johnson; that the intelligence community would be under particularly close scrutiny; and that Congress would be taking a hard and questioning look at all research and development. 68/ Dr. Wheelon, who had just begun to build up the Agency's scientific and technological capabilities, requested an increase in FY 1965 funds of approximately 50% over the Congressional budget figure. However, the budget request was cut below the Congressional submission, and an exhortation to the Executive Branch by the President in August 1964 urged improved efficiency and economy. The Office of Budget, Programs and Manpower, CIA, in the first quarter of FY 1965, instituted quarterly reporting by Directorates of economies effected, the first report being due 15 September 1964.

In January 1965, the Executive Officer of DD/S&T, Mr. Blake, told OBPAM that the DD/S&T found it extremely difficult to continue to report the accomplishment of economies. The Directorate was reaching the point of no return in trying to effect further monetary and personnel savings and still continue to discharge its responsibilities in an acceptable fashion. 69/

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A further BOB exercise in identification by each agency of programs or activities wherein budgetary reductions could be applied in order of relative priority drew the reply from the DD/S&T in June 1965 that no priorities would be listed by the DD/S&T because its activities were so closely interrelated in a "closed loop" that reductions could only be applied to reduce the scope of activities rather than by elimination of any one of the interrelated programs. 70/

Looking ahead to FY 1967 budgeting, the President in June 1965 said that all agencies of the Executive Branch must make hard choices, that program review would be a year-round affair, and that the BOB would begin program and cost effectiveness analyses in depth.

In the spring of 1966 the BOB imposed on CIA the DOD-style cycle of planning, programming and budgeting, which added a major responsibility to the DD/S&T's Plans and Programs Staff. Whereas it had formerly monitored and consolidated Office estimates into Directorate estimates, it now had to become involved in detail with each Office in defining goals, and in preparing five-year detailed programs and cost estimates. 71/ A "Planning-Programming-Budgeting Timetable" giving a graphic

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display of the sequence of events in the budgetary cycle can be found at Tab 6 of Appendix C, and shows clearly that budgeting for DD/S&T, as for all other Government entities, had become not only a year-round affair, but a day-to-day, continuous operation.

The importance of a mechanized system for obtaining the various categories of data required to satisfy the BOB was recognized in DD/S&T and the Administrative Staff was first given responsibility for developing procedures, in conjunction with OCS, for furnishing the data. This responsibility was later given to the Management Information Officer, appointed in mid-1966.\*

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In May 1966, the Comptroller system of management was adopted by DD/S&T and [redacted] as Comptroller, presented his first five-year estimates in response to the BOB requirement with the following 1967-72 levels set for DD/S&T funds and manpower:

Fiscal Year

1967  
1968  
1969  
1970  
1971  
1972

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\*See Chapter IV, pp. 158, 173.

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These estimates can be compared with actual obligations of CIA funds by the DD/S&T up to FY 1970, as shown on the chart at Tab 4 of Appendix C, in order to learn how much the estimates have been reduced by program cuts, project cancellations, etc. [REDACTED]

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[REDACTED] The cancellation of OSA's A-12 project and its supporting photographic and electronic systems, (even though its principal support came from NRP), was a large factor in this reduction, but a general lowering of sights due to tight money and a BOB brake on research and development spending contributed to the leveling off of the DD/S&T's CIA-funded budget at about

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[REDACTED]

As indicated above, FY 1964 and succeeding years' funding of DD/S&T projects falling under the NRP has been accomplished within the over-all NRP budget, which is firmly in the hands of the NRO Comptroller. The unhappy relationship between CIA and the D/NRO and his Staff existing during the Wheelon tenure as DD/S&T had its beginning, to a large extent, in differences over money. The DD/S&T was placed in a position of having to

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seek funds from the Director of NRO to carry out programs for which CIA had previously budgeted and had full management responsibility. Dr. Wheelon raised the question of CIA's having budgetary control over funds to support its NRP projects several times during his tenure as DD/S&T, but he was unable to force the issue, or to loosen the grip of the DNRO and his Comptroller on the NRP purse strings.

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#### 4. Personnel and Space

The increase in personnel of the immediate Office of the DD/S&T—by December 1963 the T/O called for a staff  necessitated additional suitable office space, estimated at about  square feet. Placing this requirement with the DD/S in December 1963, the Executive Officer,

\*See Appendix C, Tab 5.

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Mr. John F. Blake, noted specific deficiencies in the DD/S&T's allotted space and said that, while not unmindful of the difficulties and expense of levying such a large requirement, the fact was that the DD/S&T could no longer conduct his daily business efficiently or securely within current space allocations. Included in the space requirement was a request for two interview rooms, a conference room, and offices for the Scientific Advisory Board which had been formally organized in September 1963. 73/

Despite the continuous pressure for space, it took almost a year to acquire sufficient suitable space for the immediate office staff of Dr. Wheelon. By December 1964, however, he and his staff were suitably ensconced in the 6-E-60 complex at Langley Headquarters, which has continued since then to be occupied by the DD/S&T. Meanwhile, during 1964, some of the more pressing needs of the Offices of the Directorate (ORD, OCS, OSA, and FMSAC) were met by small additional area allocations.

The Directorate's manpower level for FY 1965

(approved July 1964) was

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DD/S&T shows the location of all Offices of the Directorate in the Langley Headquarters as of 21 December 1964. The principal changes from that date through 1970 were the removal of ORD from Langley to the Ames Building at Rosslyn in March 1966;

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5. DD/S&T Career Service

To bring the "R" Career Service management into the DD/S&T frame of reference, a Senior Career Service Board was set up by Dr. Wheelon by direction of DD/S&T Instruction 20-1 on 25 September 1963.\* The Chairman was to be appointed by the DD/S&T to serve for a one-year period, the Assistant Directors of the five Offices were named to serve as permanent members, and

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[redacted] was nominated by the Director of Personnel to serve in DD/S&T as Executive Secretary of the Board (non-voting). A first consideration of the

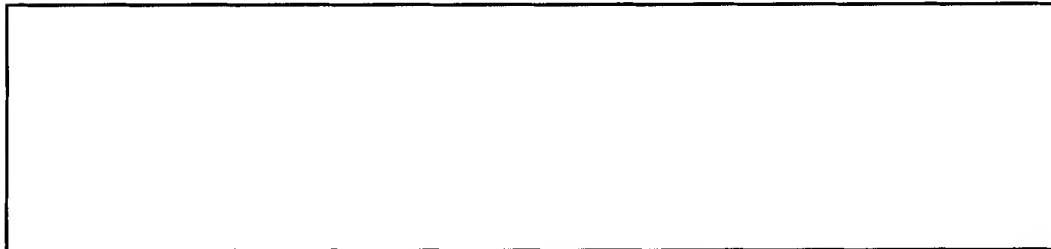
\*Appendix A, Tab 14.

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Board was to make appropriate recommendations to the DD/S&T for an administrative structure to implement the S&T Career Service Program within all elements of the Directorate. An agreed instruction outlining functional responsibilities of the Board was issued on 20 November 1963 as DD/S&T Instruction 20-2\* and later revised on 30 December 1964 to bring the Board's functions more into line with the over-all personnel policies of the Agency.\*\*



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A principal responsibility assigned to the Career Service Board was the review and recommendation with regard to assignments, transfers, and promotions in the supergrade and SPS areas. Pressure by the Bureau of the Budget to hold down numbers of supergrades throughout the government during Fiscal Years 1965 and 1966 prompted Dr. Wheelon to take over the Chairmanship of the

\*Appendix A, Tab 19.

\*\*Appendix A, Tab 29.

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"R" Career Service Board late in December 1965 in order to give closer attention to personnel matters, particularly promotions and performances of senior officers of grades GS-15 through GS-18.

Following Dr. Wheelon's departure from the Agency, Mr. Duckett as Acting Deputy Director for Science and Technology, took the position that an Office Director should chair the Board, providing the DD/S&T the opportunity to act on recommendations of the Board without having been personally involved in the deliberations. Although the stated policy called for annual rotation of the Chairmanship among Office Directors, Dr. Chamberlain has, in fact, served as Chairman since 1 December 1966. From October 1964 to June 1970, [ ] served as Executive Secretary. The incumbents of two positions have been added to the membership of the Board since its inception, namely in June 1968, the Executive Officer of DD/S&T, then [ ] and in February 1970, the Assistant DD/S&T, then Dr. Donald H. Steininger.

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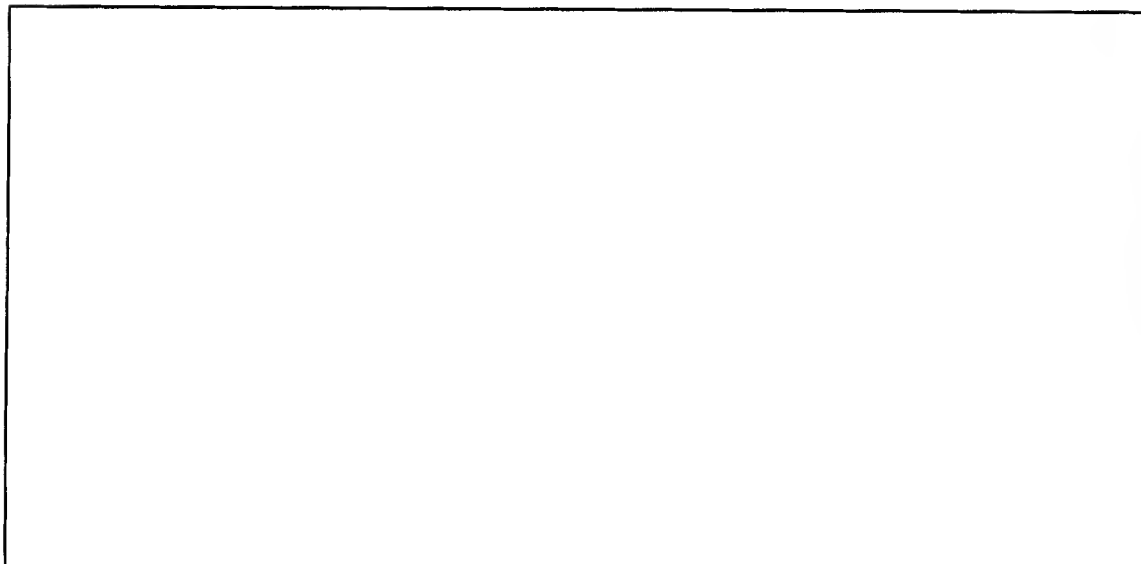
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The numbers of SPS and supergrade assignees in DD/S&T have changed since 1964 from the originally approved [redacted] supergrade slots to ceilings of [redacted] [redacted] supergrade slots for FY 1970. A chart at Appendix C, Tab 3, shows the increases in numbers of Master of Science and Doctor of Philosophy degree-holders, in the various Offices of the Directorate between 1963 and the end of 1966, and indicates the measure of effort expended in recruiting and retaining qualified scientists in the Directorate during Dr. Wheelon's tenure. [redacted]

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\*Appendix A, Tab 26.

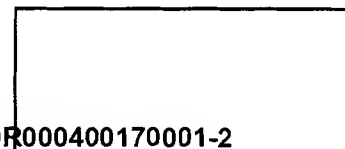
\*\*Appendix A, Tab 41.

\*\*\*Appendix A, Tab 59.

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[REDACTED]

Maximum use was made of established recruiting services of the Office of Personnel in building up the Directorate's manning complement. Special measures were also taken to attract candidates. Unlike most Agency recruiting, which aims at the college campus, Dr. Wheelon and his professional staff recruited essentially from industry. Dr. Wheelon, being well known in industry and government, was able to draw a number of highly qualified people interested in working for him. He was personally responsible for recruiting a number of men whose professional backgrounds and capabilities were known to him including, to name a few: Mr. Carl E. Duckett, to chair GMAIC and direct FMSAC:

[REDACTED] to act as Computer Science Adviser  
to OCS during its organization; and [REDACTED]  
to head the DD/S&T's Systems Analysis Staff.

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Dr. Wheelon had an impact on the recruitment of three Offices in particular. In OCS, [REDACTED] was encouraged to hire a better caliber of computer personnel with emphasis on technical analysts rather than straight computer operators. A great deal of emphasis was also given by Dr. Wheelon to the technical backgrounds of the OSI analysts. This was not without its painful aspects

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since many tried and true OSI analysts had been with the Office for ten years or more and had reached relatively senior positions, even though they had little technical background. Dr. Wheelon felt OSI analysts should be technically qualified first and should learn the intelligence business on the job. OEL was also a target for the upgrading of technical personnel and a second Deputy was added to the Office to strengthen its technical base.

Dr. Wheelon's predilection for Ph.D.'s was based on the indication of the disciplined training the individual would have received. On the other hand, he fully recognized that the degree did not ensure outstanding performance, and occasionally a Ph.D. who did not measure up had to be terminated. The introduction of many high-grade officers into the Directorate was not accomplished without a certain abrasive effect in some quarters, as illustrated by the case of one employee of five years' tenure who, on resigning, presented a bill of substantial criticism against the personnel policies of the DD/S&T. Dr. Wheelon personally investigated the case and reported his findings to the DDCI with the following summary opinion:

I now feel that we have not lost a major asset, but do recognize that his statements are symptomatic of a number of people within the organization who are being upstaged in the

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professional pecking order by new talent we are bringing in. This is a price we expected to pay and my only hope is that we are not discouraging or failing to recognize really able people in the present organization. 74/

6. Relations with Staff and Office Chiefs

When Dr. Wheelon became DD/S&T, the position of Assistant DD/S&T was filled by Colonel Edward B. Giller, who had been Acting DD/R during the transition period of June and July 1963. Colonel Giller remained in that position until May 1964, when he returned to the Air Force. His principal activities in the Directorate had been on the research and development side, and he spent a large part of his efforts in helping to launch the Office of Research and Development. After Colonel Giller's departure, Dr. Wheelon, by his own choice, did not seek a replacement for the Assistant DD/S&T slot, feeling that he could operate as well, or better, without one. (The position remained vacant for two years, until in May 1966, Mr. Carl E. Duckett was moved from his job as Director of FMSAC to take over the Assistant DD/S&T slot, through action of the Director.)

In addition to the Staff Chiefs listed in III-B-4, above, and the two Special Assistants previously noted , Dr. Wheelon added to his staff a Special Assistant for Research and Development,

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[redacted] (drawn from the OEL Staff), on 15 September 1965. The very able and experienced Executive Officer, Mr. Jack Blake (who was relied upon heavily by Dr. Wheelon for his Agency expertise), rounded out the DD/S&T's immediate staff.

During the period when there was no Assistant DD/S&T (May 1964 to May 1966), [redacted] performed some of the duties of that position and, during absences of Dr. Wheelon, [redacted] was usually named the Acting DD/S&T.

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Dr. Wheelon gave forceful leadership to the Directorate in achieving its mission. He ran the Directorate with a firm hand and with extreme confidence and self-assurance. He was exceptionally effective at chairing meetings at all levels, being always firmly in command and control, bringing out the points at issue in clear, concise exposition. His ability to design and make use of charts, graphs, and other visual media, became one of the Directorate's trademarks.

Dr. Wheelon's drive and energy were seemingly boundless, and he also demanded maximum effort and the highest quality of performance from his personnel. The demands for excellence which he made on his staff,

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however, were matched by his own aggressive defense of the Directorate's prerogatives, and his energetic efforts to achieve external recognition for the Directorate's achievements. An example of the latter was his personal interest in the design and use of distinctive DD/S&T covers and formats for all of the Directorate's publications.

7. Intra-Agency Relationships

Dr. Wheelon was fortunate to have, during the organizing period of his Directorate, the strong support of the Director, Mr. McCone, and the Deputy Director, General Carter, in what he was attempting to do. He also enjoyed friendly relations with, and the support of, the Executive Director, Mr. Kirkpatrick. Mr. McCone was anxious to see a strong technological orientation introduced and carried forward in CIA. In this effort, as has been pointed out in preceding pages, he had the backing and continuous interest of the President's Foreign Intelligence Advisory Board, the membership of which at that time was rather strongly weighted on the scientific side.

The relationships of the DD/S&T with other Directorates of the Agency during Dr. Wheelon's regime were less amicable than those with the Director's Office. As noted in pages 59-60, above, Dr. Wheelon and Dr. Cline

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were at odds over the Administration of OSI when it was under the DD/I, and their differences continued after OSI was transferred from Dr. Cline's bailiwick to the DD/S&T. Almost immediately after the transfer, Dr. Wheelon, in October 1963, had occasion to rebuke Dr. Cline over what he described as "OCI raiding parties contacting their favorite analysts in OSI and by-passing the line of command, which is responsible for the substance of.../OSI's/ contributions." 75/ He told Dr. Cline in the strongest possible terms that this must cease, and also advised Dr. Chamberlain to "let everyone in OSI know that they are not to take assignment unless you personally, or your designated officer, are in the loop and have control of the problem. I believe only in this way can we cauterize the free-wheeling tendencies of the DDI action types." 76/

In February 1964 the Assistant for Management, DD/I, and Mr. Blake reached a truce with regard to a proposed DD/I plan for standardizing printing priority indicators. Agreement was reached that DD/S&T would make a study and determine whether OSI publications would use identical priority indicators to those of DD/I, but at the same time, DD/S&T reserved the right of judgment in establishing its own printing priorities.

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In March 1964, an exchange of memoranda between Dr. Chamberlain and Dr. Otto E. Guthe, Assistant Director for Research and Reports, DD/I, sought to develop an understanding between the two principal producers of intelligence reports in the Agency with particular reference to interoffice coordination of draft reports. The analysts of each of these Offices were encouraged to coordinate with their colleagues of the other Directorate during the research and early production phases of their papers, and arrangements were made for "last look" coordinations when desired by either Office. 77/

Dr. Wheelon continued to hold the line against any real, or apparent, encroachments by the DD/I on his prerogatives. When the DD/I established his Collection Guidance Staff to assist information collection and intelligence production activities to meet the needs of the Agency and the Community, Dr. Wheelon took a dim view of its "broad charter" and insisted that it not interpose its assistance where none was needed. The services of CGS were not used to a great extent during its three years of existence by the Offices of the DD/S&T.\*

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\*See Chapter VI, pp. 308-310, below.


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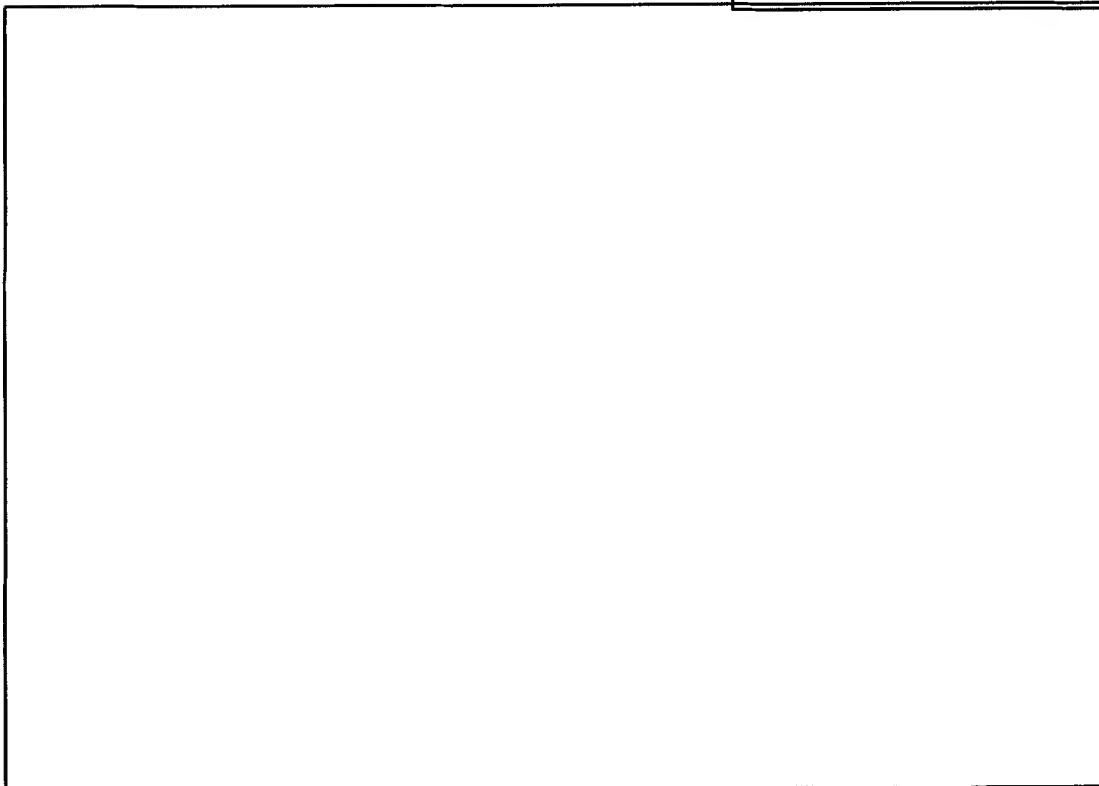
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Relationships with the DD/I smoothed out somewhat with the passage of time and the later change of leadership which took place in both Directorates during 1966, and since then have run a fairly normal course.

The DD/S&T's relationships with the Plans Directorate in the beginning developed two points of conflict: (1) the attempt to centralize all Agency R&D under the DD/S&T would have appropriated all R&D activities of the DD/P's Technical Services Division; 

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\*See Chapter IV, Section E, pp. 145-155, below.

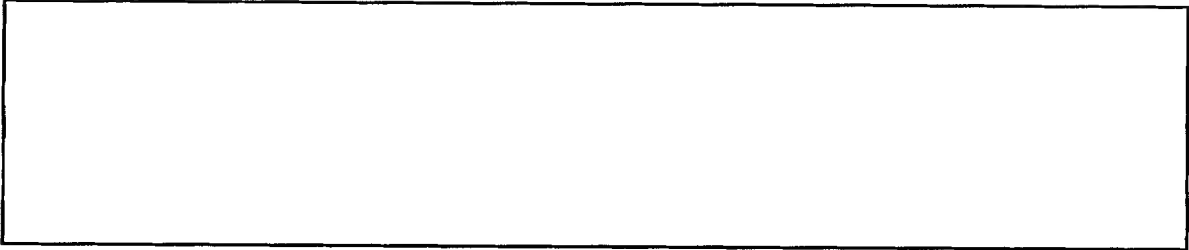
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When the DD/R was being organized in 1962, the DD/S, then Colonel White, had a favorable interest in the idea of a scientific directorate and felt its purpose was valid, and that the problems involved in setting it up would be only practical ones. He later had some differences with the DD/R over the latter's demands for contiguous space for his entire organization, and felt that Dr. Scoville had become too emotional over what could be regarded as the normal frustrations involved in setting up a new organization.\*

When the Directorate was being enlarged in the summer of 1963, Colonel White did not oppose the transfer of the computer services from the DD/S to the DD/S&T, as desired by Dr. Wheelon, even though Colonel White felt that, from a functional point of view, a case could be made for insisting that these services remain in the Support Directorate. He believed that the DD/S organization, which was, perforce, big and expensive, had enough on its platter, and that possibly the new and "sexy" S&T Directorate

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\*See pages 30-31, above.

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could more readily obtain the necessary funds to bring the computer services of the Agency to a high level of accomplishment. The one stipulation of the DD/S in relinquishing the computer activities was that the DD/S&T undertake to administer this Agencywide service in an evenhanded manner. As far as this latter point was concerned, Colonel White believed that the DD/S&T had complied, even though in subsequent years there had been established small computer enclaves for special purposes here and there in the Agency. In his position as Executive Director-Comptroller he saw the possible future need to bring all computer activities under a central control for better time-sharing and programming of available equipment, in view of the costs involved, although he was aware that this would be a matter requiring considerable study.\*

The DD/S&T has had good support from the DD/S since its establishment, and only a few rough spots have developed from time to time. Some initial problems developed with the Procurement Division of the Office of Logistics regarding the backlog of procurement requests

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\*This, and the preceding, paragraph based on conversation with Colonel L. K. White, Executive Director-Comptroller, on 24 June 1971.

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early in 1964, and the failure of the DD/S&T to receive the high priority treatment its Offices expected. These matters were ironed out on an ad hoc basis while the over-all procurement policies of the Agency were undergoing review, looking toward eventual decentralization of procurement, which was initiated on a small scale in 1968.\*

Communications support has continued at a high level throughout the life of the DD/S&T, maintaining the Directorate's vital communications links, through special channels, with its overseas operations, and with the contractors producing its equipment and carrying out its research and development. The Office of Security has also given the DD/S&T excellent support, particularly in the area of industrial security, where the Offices of the Directorate require a large commitment of specially trained security officers; in the support of "exotic" clearance control and procedures; and in the handling of special category documents and material in transit, such as the couriering of exposed film from operational missions from the field to processing facilities and to Headquarters. Other relationships with the Support Directorate have been of a generally routine and beneficial nature.

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\*See pp. 156-161, below.

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8. DD/S&T External Relations

a. The White House

The DD/S&T's work with White House boards and committees is summarized under III C, above. In addition to those White House groups listed there, Dr. Wheelon developed excellent rapport with Dr. Donald F. Hornig, the President's Science Adviser, appointed by President Kennedy in November 1963, and retained by President Johnson. Dr. Wheelon, between 1964 and his departure in 1966, made a point of meeting with Dr. Hornig and members of his staff on a bi-weekly basis, and in ad hoc sessions as circumstances demanded, briefing them on the Agency's complete span of S&T activities, from the technical aspects of collection systems development, to interpretation of substantive intelligence. These meetings were fruitful for both sides: it was helpful for the Science Adviser to have these full and frank discussions of S&T activities in the Intelligence Community, and it was equally useful for the DD/S&T to have a hearing at the White House level.

Besides the DD/S&T's contributions to annual and special reports by the DCI to PFIAB, and to talking papers for the DCI's use at PFIAB meetings, Dr. Wheelon's personal participation in the deliberations

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of PFIAB and PSAC during 1964-66 was almost entirely related to problems developing out of the National Reconnaissance Program. He was called on to testify before these groups and their specialized panels on all aspects of the Directorate's technical collection programs, including capabilities and technical characteristics of systems, feasibilities, and costs, and on occasion he was queried with regard to the relationships within the NRO between CIA and the Air Force. In his technical presentations he gave uniformly clear and succinct expositions, with well-marshaled facts and figures, thus gaining a reputation as a most persuasive advocate for the Agency's role in science and technology. With regard to his appearances before the PFIAB and its panels to testify on the CIA/NRO situation, he frankly and forcefully brought the problems into the open, but the net result was a widening of the breach.\*

b. Interdepartmental Relations

In Dr. Wheelon's relations with the Pentagon, the most frustrating problem he faced, as had also been the case with Dr. Scoville before him, and the

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\*Two very descriptive reports of such testimony by Dr. Wheelon before the PFIAB and its Baker Panel on NRO activities can be found at Tab 54 of Appendix D.

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one which overshadowed other more amicable and productive joint activities, was his struggle with the NRO, and particularly his relationship with Dr. Brockway McMillan during the latter's tour as Director of NRO. The CIA/NRO story is told in Chapter V of this history; therefore it will only be noted here that one of the most outstanding achievements of Dr. Wheelon during his term as DD/S&T was his part in helping to salvage for CIA a respectable role in the National Reconnaissance Program, particularly in the satellite reconnaissance field.

The DD/S&T's relations with DOD's National Security Agency in the collection and analysis of Elint have been strained from time to time, but generally speaking, no harm to the National Elint Program has resulted.\*

In other DOD relationships during the life of the Directorate, varying from area to area and project to project, it can be said that cooperation with Defense agencies has produced fruitful results. Over-all governmental economies have been effected by the sharing of successful research and development, the joint use of

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\*See Chapter VI-C-3, "Office of Elint," and Appendix E, Tab 9, "Headquarters Elint Processing Center" for further details of this relationship.

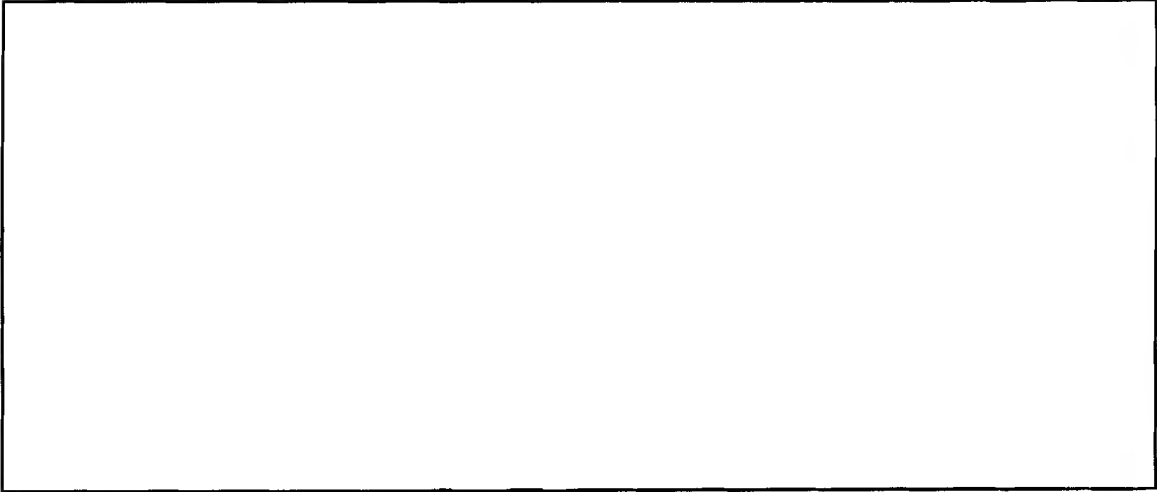
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each other's facilities, and the mutual exchange of intelligence in S&T fields.



(b) FMSAC's good working relationship with the Defense Special Missile Analysis Center which was set up at Fort Meade in 1964, and particularly the improvement in FMSAC's ability to task DOD collection assets; (c) ORD's research and development coordination with DIA and ARPA and the application of ORD's research and development resources to the problems of the Defense agencies; and (d) the close DD/S&T cooperation with NASA initiated in 1963 when Dr. Wheelon was AD/SI, developing into mutual assistance agreements for analysis of intelligence data on foreign space events and technology, and for consultation on U.S. national space problems.

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c. Scientific Community

In carrying out the PFIAB's recommendation that the whole spectrum of modern science and technology be brought to bear on intelligence problems, Dr. Wheelon fostered the closest cooperation between his staff and the American scientific community, both academic and industrial. His usage of expert advisory panels has been noted above, pages 82-87. In addition, he, in coordination with the President of M.I.T., Dr. James R. Killian, organized a series of scientific discussions known as the "Boston Dinners," several of which were held at the M.I.T. Faculty Club during 1964 and 1965. Participating, besides the top staff of the DD/S&T, were outstanding men of science of the United States, such as Dr. Jerome Wiesner, Dr. Edwin H. Land, and former science adviser to President Eisenhower, Dr. George Kistiakowsky.

A series of "Dining-In's" was organized by Dr. Wheelon and held in the Director's dining room at Langley Headquarters, allowing Directorate staff to listen to invited guests from Defense and Industry and to join in round-table discussions. Symposiums were held at intervals to bring together the experts in various fields of science and technology and to explore the state-of-the-art in such

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fields as microminiaturization, lasers, and over-the-horizon radar, to name a few.

In the interest of maintaining the professionalism of the DD/S&T staff and in keeping each scientist abreast of the latest developments in his own specific field, the professional personnel of DD/S&T were encouraged by Dr. Wheelon to maintain their relationships with scientific societies and organizations and to attend appropriate conferences and seminars of a substantive nature. In accordance with this policy (which was established by DD/S&T Instruction 22-1 of 7 May 1964) such personnel were given the opportunity of attending one conference in their field each year at Agency expense.

9. Dr. Wheelon Resigns

The close personal involvement of Dr. Wheelon in the many facets of the Directorate's activities has been noted in various contexts in the preceding pages, along with an indication of the strong leadership which he exercised over the Directorate's affairs, and his zealous guardianship of his own and his Directorate's prerogatives. It could be said in retrospect, however, that his most outstanding accomplishment was in actually bringing the Directorate for Science and Technology to a viable state, with a

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staff [ ] during a period of budgetary stringency in government and of sharp competition for available scientific talent, and with less than the wholehearted endorsement of two of the other three Directorates. A less aggressive and self-confident man would probably not have succeeded.

Paradoxically, the characteristics which enabled him to succeed in his undertaking were those which, on other occasions, made it difficult for some people to deal with him. He was a young man of great brilliance, but as an adversary he was known to some as an in-fighter, with no holds barred.

Dr. Wheelon tendered his resignation to the Director, Mr. Helms, in July 1966 and said that, in accordance with his promise to Mr. McCone to take the job as DD/S&T for no less than three, and no more than four, years he had decided to accept an offer from industry which he found most attractive. It was known that he kept a checklist of the things he intended to do before he considered his job complete. He had reached the end of his checklist by mid-1966 and in his letter of resignation he said he felt he had accomplished his major objective in creating a technical intelligence component for the Agency. His resignation was effective as of 23 September 1966.

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IV. Directorate Under Mr. Duckett, September 1966—1970

A. Background of Appointment\*

Mr. Duckett's appointment in May 1966 as Assistant DD/S&T, as previously noted, followed a period of two years in which Dr. Wheelon worked without an Assistant Deputy Director. When the new NRO Agreement was signed in August 1965, Dr. Wheelon indicated that he could not work under that Agreement and that he intended to resign. He did not carry through this plan right away, and it became necessary for the Director to make some changes in order to maintain the truce reached with the Pentagon and get on with carrying out the Agreement which he and Mr. Vance had signed. Dr. Wheelon was removed from the NRO arena by the transfer to [ ] on an interim basis as of 15 September 1965, of the responsibility for CIA's NRO activities. Dr. Wheelon's departure was anticipated as being imminent, and a quiet search for a replacement was initiated by Admiral Raborn.

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Dr. Wheelon continued to stay on as DD/S&T, however, through the end of 1965 and into 1966. On 16 May 1966, just a month before Admiral Raborn resigned as DCI, [ ] and his function as Director of Reconnaissance

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\*From a conversation between the writer and Mr. Duckett, July 1971.

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for CIA were removed from the DD/S&T's Office and transferred to the Director's Office. On the same day Mr. Duckett was appointed Assistant DD/S&T, and during the next four months until the effective date of Wheelon's resignation (23 September 1966), Mr. Duckett had the responsibility of running the Directorate for a great deal of the time while Dr. Wheelon was out of the country or on leave.

When, on Dr. Wheelon's departure from the Agency, Mr. Duckett was made Acting DD/S&T, he began a difficult period of about seven months when he had the responsibility of carrying on the affairs of the Directorate without feeling free to revamp the organization, since at any time a new Deputy Director might be appointed. He felt he should only make what decisions were critical and remedy any crisis situations, for instance with regard to personnel assignments.

The Director, then Mr. Helms, wished to confirm Mr. Duckett as Deputy Director, and in the fall of 1966 he consulted with responsible White House advisers to that end. Some opposition arose on the part of a few members of the PFIAB who believed the position must be filled by a nationally prominent scientist with a Ph.D. degree. 25X1

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Mr. Duckett had no degrees, but had more than twenty years in operational engineering and program management in the fields of radio communications, radar, electronics, and missiles. His last previous position before coming to CIA as Director of FMSAC and Chairman of GMAIC had been as Director of Missile Intelligence at the Army Missile Command, Redstone Arsenal.

Several candidates for the DD/S&T position were considered over the ensuing months but none had all the desired qualifications and was also available and willing to take on the assignment. Meanwhile, Mr. Helms, who felt satisfied that Mr. Duckett was equal to the job, made every opportunity for his exposure before the PFIAB in giving briefings on the Agency's S&T programs, and in providing technical back-up for the Director's own appearances. After a few months, the members of the Board were impressed enough with Mr. Duckett's scientific background and capabilities to withdraw their opposition, and Mr. Helms proceeded to confirm him as DD/S&T effective 20 April 1967.

B. Reorganization of Office of the DD/S&T, 1966

There was no Directorate-wide reorganization as a result of Dr. Wheelon's departure; however, the staff

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of the Office of the DD/S&T had undergone a reorganization between May and July 1966 just prior to Dr. Wheelon's leaving, and while Mr. Duckett was Assistant DD/S&T.

25X1 The DCI, Admiral Raborn, in September 1965 had appointed [ ] to the newly-designated position of Director of Reconnaissance, CIA, in addition to his other duties which included that of Special Assistant to the DD/S&T. He was to serve as the Agency's focal point in all liaison with the NRO and to formulate, with appropriate coordination, the CIA position on all matters relating to the National Reconnaissance Program (including budgeting). In March 1966, [ ] added to his staff 25 the position of Assistant for Financial Management to support him in coordinating budget and financial management 25X1 matters relating to the NRP.\* [ ] was appointed to this post on 11 March 1966.

25X1 On 16 May 1966, when the DCI directed that [ ] and his position as Director of Reconnaissance be transferred to the DCI's Office for reporting purposes,\*\* 25X1 [ ] function was retained in the Office of the DD/S&T and, in order to centralize control over the Directorate's planning, programming, and budgeting for both

\*Appendix A, Tab 42.

\*\*Appendix A, Tab 43.

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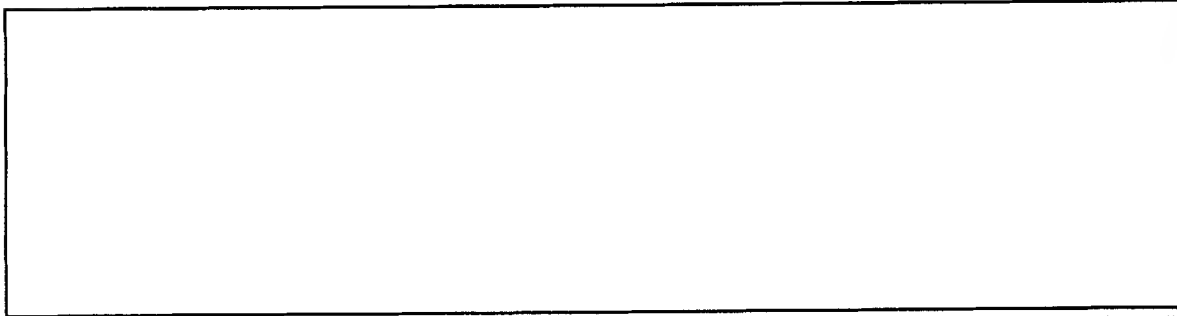
CIA-funded and NRO-funded programs, a comptroller form of management was adopted by the Directorate and [redacted] was named DD/S&T Comptroller.

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Further staff realignments proposed by the Executive Officer, [redacted] (who had succeeded Mr. Blake in December 1965), were considered and revised, and on 1 July 1966 additional staffing plans were announced, resulting in the following organization:\*

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Procurement Management Staff, [redacted]

Chief. Within both the NRP and the CIA research and development programs, substantial resources were being devoted to contract procurement activities and the point had been reached where Directorate overview was essential to ensure that, apart from substantive considerations, the best interests of the Agency and the U.S. Government were being served. The Chief of the Procurement Management Staff was made responsible for the general overview of contracting

\*Appendix A, Tab 47.

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and procurement management activities of the whole Directorate and was responsible for advising and recommending policy to ensure uniform handling of Directorate contract submissions, in coordination with the Office of Logistics and the Security Management Staff.

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Security Management Staff, [REDACTED]

Chief. Security implications of the widespread activities and programs of DD/S&T demanded a centralized security responsibility. Domestic and foreign field activities, as well as increasing industrial relationships required the formulation of consistent security policies and procedures and over-all direction of the security activities of the individual Offices of the Directorate. Immediate goals to be pursued were the promotion of greater uniformity in personnel and physical security standards of the three compartmented systems—SI, [REDACTED] TKH—in which the DD/S&T was most heavily involved, and a simplification of the complex machinery for granting clearances and approvals; standardization of security approach to research and development projects to reduce special access lists; and coordination with the Office of Security to reduce the number of clearance options in dealing with contractor and consultant personnel.

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Administrative Support Staff, [REDACTED]

Chief. The responsibilities of the Administrative Support Chief included overview of personnel management, training, and career development under the Chief of Personnel,

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[REDACTED] and logistics support and planning under [REDACTED] Logistics Officer; also reporting to

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the Administrative Support Chief were the Registry with

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[REDACTED] in charge, and the Graphics Section under [REDACTED]

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Intelligence Liaison Support Staff, [REDACTED]

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[REDACTED] Chief. This officer was made responsible for the continuous overview of intelligence production and for providing substantive support and coordination with other components of the Agency and other members of the Intelligence Community. He served as a focal point for intelligence requirements of the Directorate and monitored DD/S&T involvement with USIB, the National Security Council and its bodies, and the President's Foreign Intelligence Advisory Board.

All of the above staffs reported to the DD/S&T through the Executive Officer, [REDACTED] and rounding out the organization were the previously established Systems Analysis Staff with [REDACTED]

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as Chief, and the Special Assistant to the DD/S&T for  
R&D Coordination, [REDACTED]

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This organizational set-up has been retained  
by Mr. Duckett since he took over as DD/S&T with only a  
few changes. In June 1967 the Senior Executive Group,  
advisory to the DCI, recommended, and the DD/S&T agreed,  
that the Systems Analysis Staff, headed by [REDACTED]  
and consisting of three Physical Scientists (Research)  
and one secretary, be transferred from the Office of the  
DD/S&T to the National Intelligence Programs Evaluation  
(NIPE) Staff, attached to the Office of the Director, in  
order to assist that staff in its systems evaluation  
work, covering the entire Intelligence Community. The  
Design and Analysis Division of OSP was well established  
and staffed to carry on the Directorate's satellite  
systems analysis.

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Other principal changes in Mr. Duckett's imme-  
diate staff since 1967 have been: (1) [REDACTED]

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[REDACTED] named Executive Officer on 20 November 1967,  
following the transfer of [REDACTED]

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[REDACTED] designated Comptroller 21 January 1969, vice  
[REDACTED]

\*Appendix A, Tab 54.

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[redacted] reassigned;\* and (3) Dr. Donald H. Steininger, (formerly on the staff of the White House Science Adviser, Dr. Hornig), appointed Assistant DD/S&T on 1 November 1969, succeeding Dr. Lauderdale, who resigned to take a position in industry.\*\*

C. Personnel and Training

1. Over-all Growth of Personnel

When Mr. Duckett took over as DD/S&T, the 25X1 approved personnel ceiling for FY 1967 had reached the top figure for the Directorate to that time of [redacted]. Besides the general growth Directorate-wide, a large part of the more recent increase at that time was due to the activation of an overseas A-12 detachment for operations in the Far East in 1967. The cancellation of the A-12 25X1 program in FY 1968 lowered the ceiling by about [redacted].

[redacted]

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\*Appendix A, Tab 57.

\*\*Appendix A, Tab 60.

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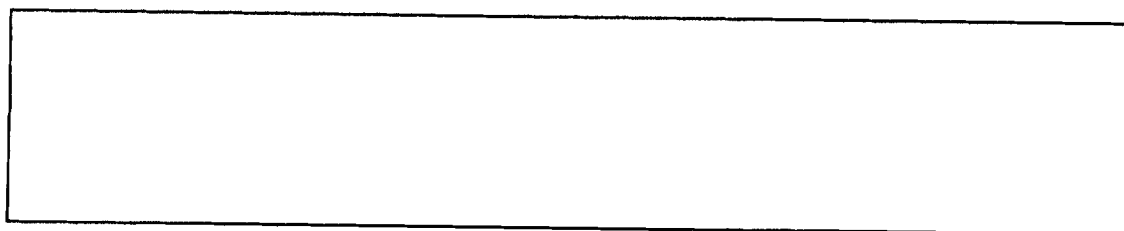
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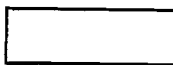
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The Agency Retirement Program has not affected the staffing of the Directorate as yet. Between September 1967 and the end of 1970, only  retirements occurred, but on an increasing scale. Routine recruitment through the Office of Personnel, and shifts within the Directorate have been adequate to fill occurring vacancies and to staff new projects.

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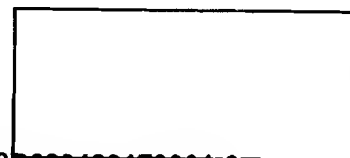
## 2. DD/S&T Career Development Course

Early in 1966 it became clear that S&T personnel, many of whom had been hired since 1963, required in-house training which would focus on the functions and responsibilities of DD/S&T and also provide insight into other Agency elements dealing with technology. The CIA Career Training Program could not satisfy this need and although OSI had previously established and operated a Scientific Intelligence Officers Training Program, it addressed primarily training germane to the analytical functions of OSI officers. Dr. Wheelon expressed an interest in developing a DD/S&T Career Development Course to run for a year with representation from each DD/S&T

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Office, and to begin in September 1966. Office Directors felt it would be advisable to delay the course a year, spending the interim in carefully developing goals and content of the course. Dr. Wheelon, however, held firm for beginning in 1966, and the summer months were spent in developing the course and selecting students. The program was approved by the Executive Director/Comptroller in September 1966; Dr. Wheelon had then resigned from the Agency and Mr. Carl Duckett, as Acting DD/S&T, continued to carry the program forward.

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[redacted] of OSI was selected as the first Course Director. He cooperated closely with the Office of Training in launching the first program and working out details. The [redacted] all from DD/S&T, 25X1 were relative newcomers to the Agency and were drawn from grades GS-9 through GS-13. The cost of the first course, 25X1 exclusive of salaries but including travel [redacted]

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[redacted] (which was absorbed in the DD/S&T budget). After Directorate-wide consideration of the planned curriculum, it had been decided to cut the length of the course from a full year to nine months.

Categories of study undertaken were (1) Agency orientation and background on Communism, (2) collection

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of technical information, (3) analysis of technical information, (4) systems development and deployment, (5) research and development, and (6) operations. Through various techniques (examinations, written and verbal reports, and instructor evaluations), students were graded on their performance in the course and the evaluations were recorded for purposes of future assignments. At the end of the 1966-67 course, a critique by the participants resulted in a restatement of objectives for the course and a comprehensive syllabus and structure based on the experience of the first course.

There had been four courses held by the end of 1970, the last two being shortened from nine months to five months duration as a result of experience. The second course, directed by [ ] of OEL, added 25X1 representatives from DD/I(NPIC) and DD/S (Communications); the third course, directed by [ ] of OSI, was 25X1 attended by the largest class to date [ ] 25X1 students coming from the other three Directorates; the 25X1 fourth course, directed by [ ] had [ ] 25X1 representatives from the other Directorates.

The fourth course included visits to U.S. technical/military facilities, a special one-week Operations

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Course [ ] and a one-week visit to the Office  
of Communications Training Center [ ]

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The course has proven to be of great value in  
familiarization for career development, uncovering talent  
for new positions, and improving coordination among the  
Offices of the Directorate, and among Directorates. At  
the end of 1970 a fifth course was being prepared for  
January-May 1971, under the direction of [ ]

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[ ] of the ORD Analysis Division.

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E. Coordination of Research, Development and Engineering

1. Background

After the establishment of the DD/R in 1962 and its later evolution into the DD/S&T, the question of the coordination of the total research and development activities of the Agency, particularly as between ORD/DD/S&T and TSD/DD/P, did not develop into a smooth working agreement. As pointed out in connection with the establishment of the Directorate for Science and Technology, Dr. Wheelon did not gain control over all Agency research and development. In mid-1965 when the DD/S&T draft statement of mission and functions was being circulated for Agency-wide concurrence, the R&D coordination issue again came to the fore. [REDACTED]

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[REDACTED] expressed reservations concerning language in the draft statement which he feared might allow DD/S&T to intervene in operational activities abroad, infringing on DD/P's prerogatives, particularly in the audio operations field.

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At the same time, an Inspector General's report on NPIC indicated serious technical problems and lack of coordination with other Agency technical components,

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and recommended formal program review be conducted jointly by NPIC and the technical components responsible for development of reconnaissance systems, with a timely opportunity for NPIC to contribute to systems design.

The over-all problem of R&D coordination in the Agency was then given precedence over agreement on the DD/S&T mission and functions statement. The DCI agreed with Dr. Wheelon to entertain a proposal for a draft charter putting the DD/S&T in an authoritative position over all Agency technical activity in order to simplify and strengthen the Agency's R&D efforts.

A draft proposal attempting to satisfy all parties was circulated to the Deputy Directors for comments on 21 March 1966. This draft represented efforts begun in September 1965, and encompassed approximately fourteen separate versions of the proposal. The concept of a single point of responsibility was maintained throughout all the drafts. Points of difference were reflected principally in the details of implementation, in the administrative location of the Special Assistant who would perform the day-to-day coordination, and in similar particulars.

Doubts were expressed as to whether the DD/S&T could be objective in a staff responsibility to the

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DCI for over-all R&D coordination while his own Offices pushed claims in competition with the other technical components; however, the idea of a super "Technical Director" was not seriously considered and the basic search was for a structure which was workable in terms of achieving the Agency's objectives and being acceptable to all of the Directorates.

The proposal hung fire for more than a year, from March 1966 to June 1967, during which time there was a change in Directors (Mr. Helms replaced Admiral Raborn), and Dr. Wheelon late in 1966 departed from the Agency.

25X1 An effort to regularize procedures and improve the quality of R&D work in the DD/S&T, prior to attempting to improve the over-all Agency R&D activities, led to the production, under the leadership and guidance of the Special Assistant to the DD/S&T for Research and Development, [redacted] of a Project Officers' Manual. The objective of the Manual was to provide a working aid for those officers having a direct responsibility for the initiation and monitoring of contracts for research, development, and engineering, and for studies pertaining to scientific fields, and to establish certain common procedures and common definitions of terms for

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their use. After coordination Agency-wide, the Manual was printed in early January 1967 and was put into use beginning in April 1967 by the Offices of DD/S&T. The Office of Communications, NPIC, and TSD later confirmed that their R&D project activities were generally consistent with the Manual, with certain small differences in office procedures.

In the spring of 1967, as a result of an attempt by the Office of Planning, Programming, and Budgeting to develop a coordinated R&D program for audio operations, difficulties were encountered in getting ORD and TSD to agree on the scope of their respective roles. A series of meetings was instituted by Dr. Sidney Gottlieb, Chief of TSD, to resolve problems and improve the over-all efficiency of both offices' operations in the audio field. Again it was apparent that the coordination of one segment of the Agency's R&D activities was dependent on the reaching of accord on over-all coordination of all research and development.

2. DD/S&T Made Coordinator of RD&E\*

The draft proposal [ ] which had languished for some 14 months, was then revived and with minor changes was forwarded to the Executive Director with

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\*This section based on conversations with the Special Assistant to DD/S&T for R&D, [ ], in January 1971.

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a covering memorandum by the DD/P and the DD/S&T outlining the current situation, endorsing the objectives of the draft notice, and concurring in a "Memorandum of Understanding" between ORD and TSD concerning their mutual technical efforts. The Notice\* was published on 17 July 1967 and promulgated the original objective, unchanged, i.e., that subsequent to centrally coordinated planning, the DD/S&T was to monitor decentralized execution of the R&D program, making use of all available Agency talent and expertise and retaining engineering support in close contact with operational elements.

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Procedures set forth in [ ] gave the DD/S&T responsibility as staff officer to the DCI for coordination of all Agency RD&E and authorized him to appoint a Special Assistant to aid him in the assignment. He was required to convene all Deputy Directors at least annually in response to the Agency Program Call.

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There was some dissatisfaction with the arrangements under [ ] on the part of TSD's officers who contended that the DD/S&T acts as both protagonist and judge, or decision-maker, in the meetings wherein RD&E

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\*Appendix A, Tab 52.

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projects are reviewed for approval, and that ORD gives TSD less than wholehearted support in the area of broad-base research which TSD is not authorized or funded to do for itself.\*

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Ad hoc arrangements prevailed for a time as procedures under [ ] were put into operation. The Special Assistant to the DD/S&T for R&D was able to report at the end of 1968 that there had been better planning, through extension of past coordination practices and the participation of the other Deputy Directors with the DD/S&T in helping to steer the R&D program. Further, there was an improvement in R&D contracting practices through the introduction of the contracting teams, and better data and management control through use of the automatic data system for monitoring contracts throughout the Agency's technical components.

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In September 1970, Mr. Carl Duckett, in his position as RD&E Coordinator, proposed to the DCI that his previously informal RD&E coordination and monitoring activities under [ ] be formalized; that a Research, Development, and Engineering Board replace the old

\*Based on a conversation between the writer and the Deputy Chief of TSD, [ ] December, 1970.

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25X1

Research and Development Review Board (which had been discontinued at the end of 1967); that membership of the new Board consist of two representatives from each Directorate, two from PPB, one from OSP, and others as might be necessary to carry out the instructions of  and 25X1 that the Special Assistant to the DD/S&T for R&D should serve as Chairman. The principal task of the Board would be preparation and submission to the DD/S&T of coordinated plans and cost estimates for the Agency RD&E program, ensuring against unnecessary or wasteful duplication, and placing special emphasis on identifying gaps in the Agency's RD&E efforts.\*

A distinction should be drawn between duplication which is unnecessary and wasteful, and that which is controlled and purposeful. The latter type is considered to be generally a wise policy in research, both basic and applied, due to the high degree of uncertainty which may be associated with any given research problem, as well as the difficulty of most researchers to remain unbiased and to maintain an open mind. An example of the latter type is the duplication by ORD of some of TSD's

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\*Appendix A, Tab 62.

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exploratory work in secret writing, which was requested by the Chief of TSD, Dr. Gottlieb, and which paid off with an operationally feasible system after the reinforcement of a "second look" by a separate research team.

Two interrelated problem areas in the Agency's RD&E program have been, and remain, matters of concern to Mr. Duckett, both as DD/S&T and as Coordinator of RD&E for the entire Agency. First, research and development requirements, Agency-wide, have continued to be so broad that they do not furnish needed guidance, and neither the Office of National Estimates nor the Office of Planning, Programming and Budgeting has been helpful in this respect during the preparation of the over-all RD&E program. The Agency has undoubtedly undertaken some work which has proven valueless, and in other instances has turned in poor performances in research or failed to maintain an ideal balance in its various efforts. Looking to the future, work was begun in 1970 on refining research and development requirements, under the leadership of the RD&E Board to the end that such poor performance will not be repeated.

The other problem area stems from budgetary restrictions which have resulted in centering the

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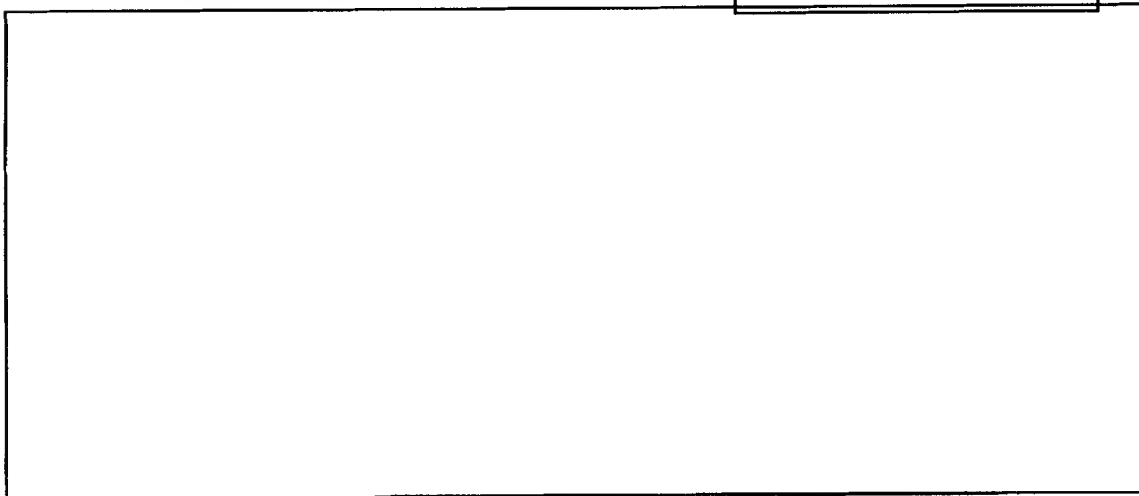
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principal RD&E efforts of the Agency on the development of operational systems to meet previously established requirements, rather than on broad-based, exploratory research, looking to scientific breakthroughs. Mr. Duckett would like to see about 80% of the RD&E budget going to the former, while 20% is given to unfettered research, not tied to requirements.

It is the judgment of DD/S&T officials concerned, using the criteria that basic research is directed toward improving the state of knowledge, and applied research is mission-oriented and has a clear relationship to the Agency's work, that there is really no basic research in the Agency's program, and very little applied research. For example, of the total Agency RD&E budgets for FY 1969 and FY 1970, amounting to

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In the case of computer research being done by ORD, it is important to consider several factors: the decision to establish and maintain the Intelligence Processing Research and Development Center (IPRD) has been hotly debated and will probably remain a questionable way of advancing the Agency's capabilities in using computers; it could be said, perhaps, that this activity is simply to put the Agency in the position to remain aware of all developments in this field; it might also be said that one purpose is to retain some particularly valuable staff employees who might otherwise resign if they could only work on mundane programs.

In summary, with regard to the DD/S&T's RD&E program, as well as the over-all Agency program, it can be said that the comparatively small amount of research sponsored by CIA from time to time is undertaken for a wide variety of reasons and purposes.

In order to compare the Directorate's total obligations for RD&E with the total Agency obligations, the figures are given below in millions of dollars for Fiscal Years 1963 through 1970.\*

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\*Figures on page 155 furnished by PPB from Congressional Budgets.

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	<u>DD/S&amp;T RD&amp;E Obligations (\$Mil)</u>	<u>Total Agency RD&amp;E Obligations (\$Mil)</u>
FY 1963		
FY 1964		
FY 1965		
FY 1966		
FY 1967		
FY 1968		
FY 1969		
FY 1970		

Mr. Duckett's principal dissatisfaction as Coordinator of RD&E for the Agency is that the whole coordination process hangs on the dollar sign; that is, the principal concern is in the share of the total RD&E budget assigned to each Directorate. He believes it is much more important to be able to advise the Director that the total RD&E budget is being spent in proper balance among the areas of research open to the Agency's exploitation. (Conceivably, the question of whether all Agency RD&E should be placed under one Directorate could again be raised in the future.)

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F. Contract Management

1. DD/S&T Relations with Procurement Division

When the DD/R first came into being, the decision was made, after discussions pro and con, to leave intact the special contracting mechanism which had been developed within the Office of Special Activities (formerly DPD), beginning with the U-2 project, but to reserve its use for truly sensitive undertakings. All other contracting for the Directorate was to be handled normally through the Procurement Division of the Office of Logistics.

In February and March 1964, during consideration by the Director of Logistics and the DD/S of a proposal for restating the Agency's over-all procurement policy, DD/S&T concern was expressed over a backlog of about 44 contract negotiation requests worth about  which had not been completed, and the fear was voiced that the proposed policy might only add more complicated procedures, thus lessening even more the quick reaction capability of the DD/S&T in accomplishing his mission.

Discussions between O/L and DD/S&T representatives resulted in agreement on simplified procedures,

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with proper front office safeguards, for preparing and submitting procurement requisitions. Corrective action was also taken in scheduling and priorities to assist O/L in expediting the truly urgent procurement actions. 25X1

In July 1966 a study of the CIA procurement system by [redacted] was undertaken at the direction of the Executive Director, pursuant to an IG recommendation. The survey report recommended among other things (1) the establishment of a Contract Review Board at the DD/S level; (2) decentralization of the Agency procurement system; and (3) the establishment of a team concept for procurement based on the audit firm's favorable impression of the OSA experience. 78/

Actions taken within the DD/S&T to improve contracting procedures as a result of the survey included:

a. The addition to the immediate staff of the DD/S&T of an officer (nominated by the Director of Logistics) charged with over-all procurement management responsibilities for the Directorate.\* 25X1

b. Appointment of the Special Assistant to the DD/S&T for R&D Coordination, [redacted] as DD/S&T member of the Contract Review Board.

\*See pp. 135-136, above. 25X1

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c. The setting up of a Contract Information System within the DD/S&T Comptroller's shop. This system provided, when fully developed, for the storage, collating and retrieval of budgetary, monetary, contractual, and technical information concerning Directorate projects. This was the first system in the Agency having the capability to provide machine assistance in control of budget, projects and contracts in a systematized manner. The Management Information Officer,  was charged with providing monthly computer runs listing contract information on all DD/S&T research and development and production contracts. These listings were later augmented, with the agreement of the other offices concerned, to include R&D contract information for TSD, the Office of Communications, and NPIC. 25X1

d. Quarterly forecasting of Agency-funded contract actions planned for the ensuing quarter was initiated by Mr. Duckett beginning in January 1967, and the DD/S&T Comptroller was charged with conducting a review by program categories, sub-categories, and elements, with the aid of computer listings furnished each Office.

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2. Team Concept Inaugurated

The recommendation made by the audit firm for a decentralized procurement system to be instituted throughout the Agency with contracting authority being delegated to each of the Deputy Directors was not received favorably by the Deputy Directors, but eventually a compromise plan was worked out whereby the Director of Logistics would appoint contracting teams from his own staff to work in each of the Directorates for a trial period.

On 4 March 1968, the OEL Contracting Team was set up to accomplish Agency-funded RD&E, external analysis, and other procurement contracting for the Offices of Elint, Computer Services, and Scientific Intelligence, and the Foreign Missile and Space Analysis Center. A senior contracting officer, [REDACTED] was provided by O/L, and two contract specialists and an industrial contract security officer completed the team. Contracting authority was delegated to the Team Leader subject to review by the Contract Review Board in specified cases. 79/

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Review of the Special Contract and Procurement Branch of OEL (as the contracting team was known)

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after a year's work brought a favorable appraisal by the Chairman of the Contract Review Board and the DD/S&T, and on 27 February 1969, another Contracting Team was added to operate in ORD at Rosslyn. This gave contracting team coverage to all Offices of DD/S&T. The OSA Contracts Staff continued to manage the covert procurement for sensitive projects assigned to OSA. At the time OSP broke away from OSA in September 1965, complete separation of the contracting activities of the two Offices was agreed, and delegation of special contracting authority was made to Mr. James H. McDonald, thus giving OSP its own contracting capability.

Mr. Duckett recognized three areas of concern in the DD/S&T contracting system: (1) the proliferation of contracting authority and policy throughout the Directorate; (2) the necessity for consistency in the business and security approach to contractors dealing with Directorate Offices; and (3) the necessity for economic utilization of all contracting, security, and audit personnel assigned to the Directorate. He therefore took action in February 1969 to assign to the Chief, Procurement Management Staff, then  additional duties as Senior Contracting Officer for

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Agency-funded contracts. The Director of Logistics delegated contracting authority to [ ] who in 25X1 turn delegated to the chiefs of the two teams. The Senior Contracting Officer is responsible for exercising policy guidance over the operations of both teams, reviewing contracts as appropriate, and assuring optimum use of team personnel. 80/

Because of the early history of total compartmentation of the special programs of OSA and OSP, their Contracting Officers have continued to receive their authority by direct delegation from the DCI. The Chief, Procurement Management Staff, however, as principal adviser to the DD/S&T on procurement, maintains liaison with the OSA and OSP Contracting Officers with a view to keeping the DD/S&T informed of all contracting policy matters.

3. Research, Development, and Analysis  
Contract Procedures


In the fall of 1968, during an Inspector General's survey of FMSAC, an inquiry into external research contracts was carried out, with two companies being singled out for special investigation- [ ] 25X1

[ ] 25X1

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 In explanation of the procedures employed in coordinating the two particular contracts under IG scrutiny as well as the other research, development, and analysis contracts of the Directorate, Mr. Duckett on 3 October 1968 gave the Executive Director a full description of those procedures, which is summarized as follows. 81/

Programs requiring external contract action received their first coordination and review during the budget submission and approval, after which quarterly reviews were conducted by the DD/S&T, his Office Directors, and the project officers. Current and projected contract programs were scrutinized with the aid of Contract Information System data.

Once a technical requirement was established, consistent with the mission and within the budget of an individual office, the contractor's proposal and the office staff study supporting it were reviewed by the Office Director and submitted to the DD/S&T for approval if for more than \$25,000 in the case of research and analysis, and more than \$50,000 in the case of research and development. If over \$150,000 the action required approval of

\*See also Section IV-G-3, "Conflict of Interest Implications," pages 168-170, below.

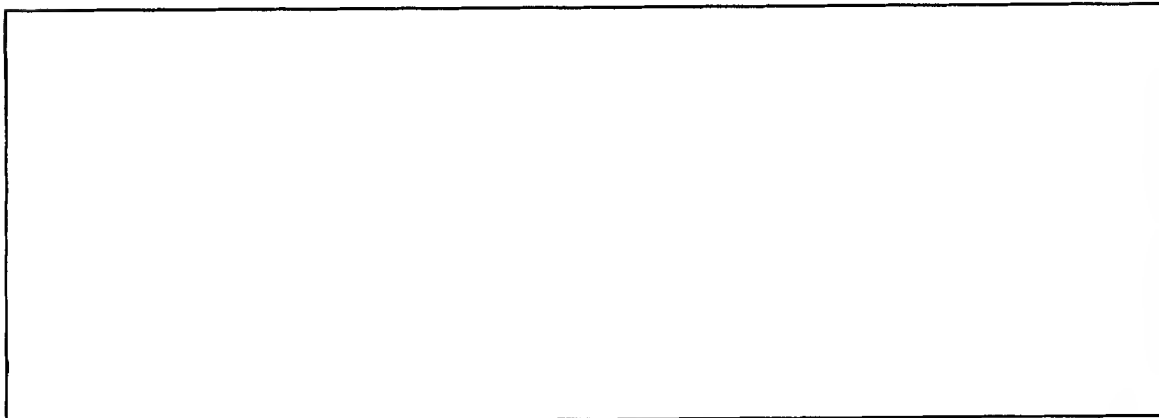
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the Executive Director, after review by the PPB.  
Agency-funded contracts for more than \$150,000 also re-  
quired approval of the Contract Review Board. Task and  
change orders involving additional work were handled  
similarly, according to the amounts of money involved.

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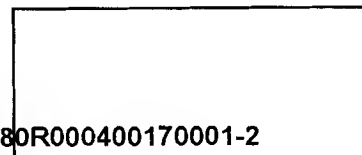
The Contract Information System in DD/S&T provided data for the recording of contractors' progress and for technical inspection reports by the project officers. It also produced exception reports when deviations from planned programs exceeded predetermined tolerances. These reports were used by the DD/S&T and his staff to monitor the contractors' progress and expenditures.

Additional coordination of DD/S&T programs was accomplished through Directorate representation on USIB panels and committees, such as GMAIC and SIC, which levy requirements on the Community and are the recipients of the finished products.

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Mr. Duckett personally attended and took an active role in the annual meetings  to review progress and plans for future tasks under their contracts. His best insight went into insuring that the tasks assigned to contractors added up to a sensible overall program. He also insisted on attendance at those meetings of his Office Directors and project officers concerned, and the contractors were represented by their senior officers, including company presidents, and the technical people involved in the work.

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The IG report following its FMSAC survey contained recommendations relating to the Directorate's contracting as follows: (1) that the DD/S&T review missile and space intelligence arrangements in the Community (including contracting) to check on duplication of effort; (2) that the General Counsel periodically review make-up of Agency advisory panels for conflict of interest implications in the light of existing contracts; (3) that the DD/S&T establish a central file of all external contracts, review contracting procedures for adequacy, and strengthen procedures for evaluating contractor performance; and (4) that FMSAC's contracts be reviewed to determine if some of the work could not be better performed in-house. 82/

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Replying to these points on 3 February 1969, Mr. Duckett (1) deferred the question of a Community-wide review in the missile and space intelligence field to the Deputy to the DCI for National Intelligence Programs Evaluation; (2) raised no objection to the General Counsel's continuous review of advisory panels, but noted that every contract entered into by the DD/S&T was reviewed by a General Counsel representative before issuance and that since 1968 all Agency-funded contracts and amendments exceeding \$150,000 were reviewed by the Contract Review Board; (3) stated that the establishment of a central file of external contracts would not ensure against duplication and that the Contract Information System and other specific measures already taken by the DD/S&T would best avoid duplication and evaluate performance of contractors; and (4) agreed that FMSAC could perform some of its contracted work in-house if given additional manpower. 83/

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G. Additional Advisory Panels Established

1. Science and Technology Panel\*

The relatively small and very senior group of scientists envisioned by Dr. Wheelon as a replacement for the Kinzel Board to advise the DCI on the over-all science and technology program of the Agency was not established during Dr. Wheelon's tenure. Such a panel did come into existence in November 1967. The initiative for its establishment was in the form of a letter dated 15 August 1967 from the DCI, Mr. Helms, addressed to prospective members of a Science and Technology Panel, requesting them to serve. This letter was originated on behalf of the DD/S&T by OSI, and set forth the purpose of the new panel which was to advise the Director on the formulation and assessment of the Agency's goals in the scientific and technological area. Dr. William Perry of Electromagnetic Systems Laboratories, who agreed to serve as Chairman, and five additional scientists, made up the initial membership. This panel, which is known familiarly as the "Perry Panel," has met on a bi-monthly basis since its first session was held 16-17 November 1968.

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\*Appendix F, Tab 12.

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It has dealt intimately with all phases of the Agency's S&T program and the DD/S&T gives great weight to its recommendations. For example, in considering the feasibility of using a particular system to satisfy a particular collection requirement, the Panel's expert judgment could be the deciding factor.

2. Strategic Intelligence Panel\*

On 6 September 1968, the Director, Mr. Helms, sent letters to a list of prospective members of a new panel to advise him on matters of Soviet objectives in strategic technological areas. The letter was originated on behalf of the DD/S&T by OSI, and received a good response from the addressees. Dr. Ruben Mettler of TRW agreed to chair the panel and eight members drawn from the scientific, political, and military communities made up the initial membership. The panel, which met first on 1 and 2 October 1968, has continued to meet several times a year since then, usually for two-day sessions, and has been a valuable source of advice to the DCI, particularly with regard to the question of U.S. capability to monitor a strategic arms limitation agreement with the Soviets.

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\*Appendix F, Tab 13.

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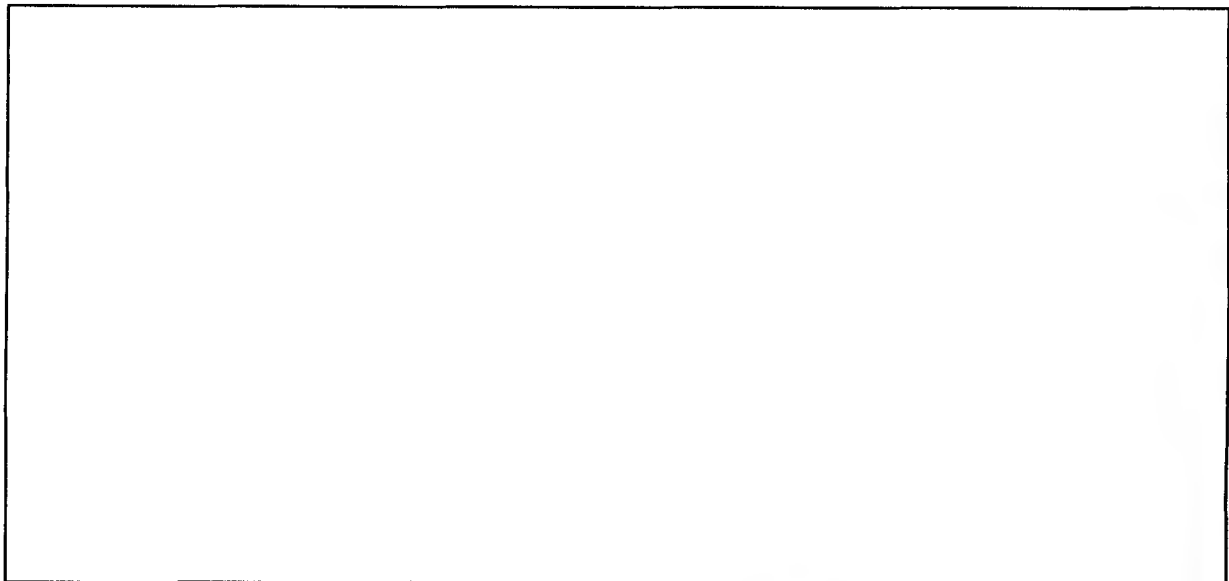
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H. Management of Directorate by Mr. Duckett

1. Philosophy of Management

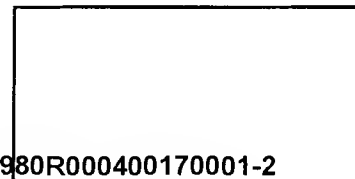
The organization which Mr. Duckett inherited was fairly well established and manned by highly skilled professional people, despite the fact that its charter for expansion had been given at a time of retrenchment within the Federal Government. The functional set-up of the Directorate, and the philosophy of intra-Directorate coordination flowing therefrom, continued to be followed by Mr. Duckett with the principal differences between his own and Dr. Wheelon's management being more in the way of style and application.

An initial difference in their methods of operation was evident in Mr. Duckett's early choice of

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an Assistant Deputy Director, and his reliance upon the A/DD/S&T to share the responsibilities for carrying on the Directorate's business. Mr. Duckett felt he needed a man who could handle the research and development and the hardware side of the business, while the DD/S&T devoted himself more fully to substantive intelligence and support to the policymakers.

The Director, Mr. Helms, agreed with Mr. Duckett that there was talent available within the Agency and therefore no need to recruit an outsider. The candidate chosen, Dr. Lloyd K. Lauderdale, had all the necessary requisites and had for the previous two years conducted a very successful development phase of  Besides R&D and systems responsibilities, Mr. Duckett assigned to his Assistant Deputy the duty of keeping tab on the Directorate's reconnaissance activities under the NRP, which duties consumed about half of Dr. Lauderdale's time. (When Dr. Steininger replaced Dr. Lauderdale in November 1969, the same relationship and division of responsibilities held good.) Mr. Duckett looked to the A/DD/S&T to be on top of all the technical details of the Directorate's programs and to keep the DD/S&T completely and

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currently knowledgeable so that he would always be in a position to back up the Director in any briefings or hearings to which he might be called.

In his management of the Directorate, Mr. Duckett feels that he has sought more advice from his Staff and Office Directors, and on a more formal basis, than Dr. Wheelon did, and, generally speaking, has made his decisions with that advice as a basis. Mr. Duckett also felt that Dr. Wheelon had a tendency to "steer the vote" of his Office Directors; for example, in his taking over the Chairmanship of the "R" Career Service Board, where he participated in the discussions of personnel actions brought before the Board, and made his own views known. Mr. Duckett did not continue this practice but made one of his Office Directors Chairman of the Board. He does not attend the Board's meetings, but acts on the recommendations which it puts forward.

Mr. Duckett has relied heavily on his regular morning staff meetings, and on the Quarterly Reviews held with each Office of the Directorate to keep himself up to date on all of the Directorate's business. The Quarterly Review also gives him the opportunity to register any doubts or disagreements on the direction in which

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any program might be proceeding, and to redirect the program if that should be necessary. The Contract Information System, using automatic data processing for controlling expenditures and fulfillment of contracts, was brought to its operational stage under Mr. Duckett as a management tool. There was some opposition and footdragging on the part of some Offices toward complying with the system; however, Mr. Duckett ordered that all Offices must cooperate and make it work. Selling the plan to the Directorate's management by giving them a clearer understanding of the plan's workings was a function of the Management Information Officer, [ ] The system, once its base was established, together with the very specific procedures followed in contract sign-off, has given Mr. Duckett a reliable means of control over the expenditure of Agency funds for external research and analysis, and other procurement.

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## 2. Priorities

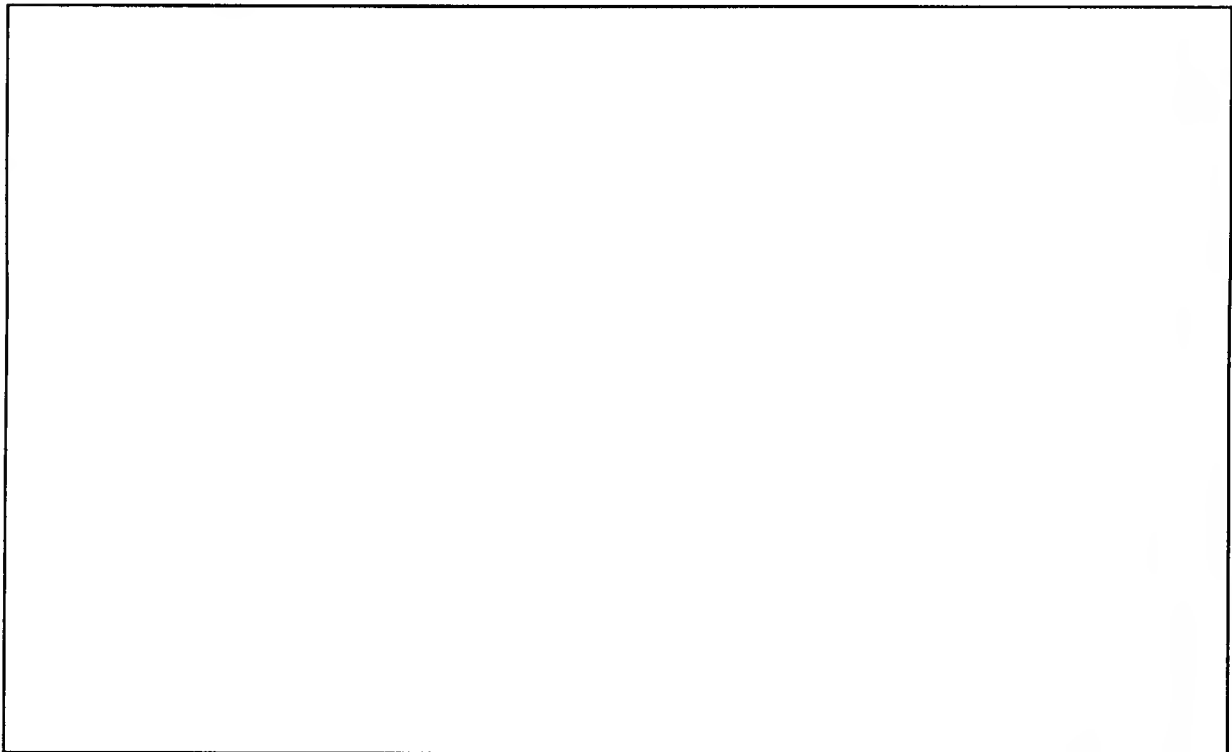
Because of the interrelationships between the functions of the Directorate's seven Offices, and the split budgeting between CIA funds and National Reconnaissance Program funds, it is difficult to keep an optimum balance of emphasis, particularly in the funding, among these

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functions. The tendency, according to Mr. Duckett, has been to overspend on collection and underspend on analysis; however, this does not mean that the amount of funds awarded one Office as compared to another is a judgment of the importance of that Office's function vis-a-vis the other. For example, the sophisticated technical collection systems developed by the Directorate are very costly, and it is therefore in the nature of things that a large share of the budget must be awarded to developing, building, and operating them, as long as they are successful in meeting priority requirements.



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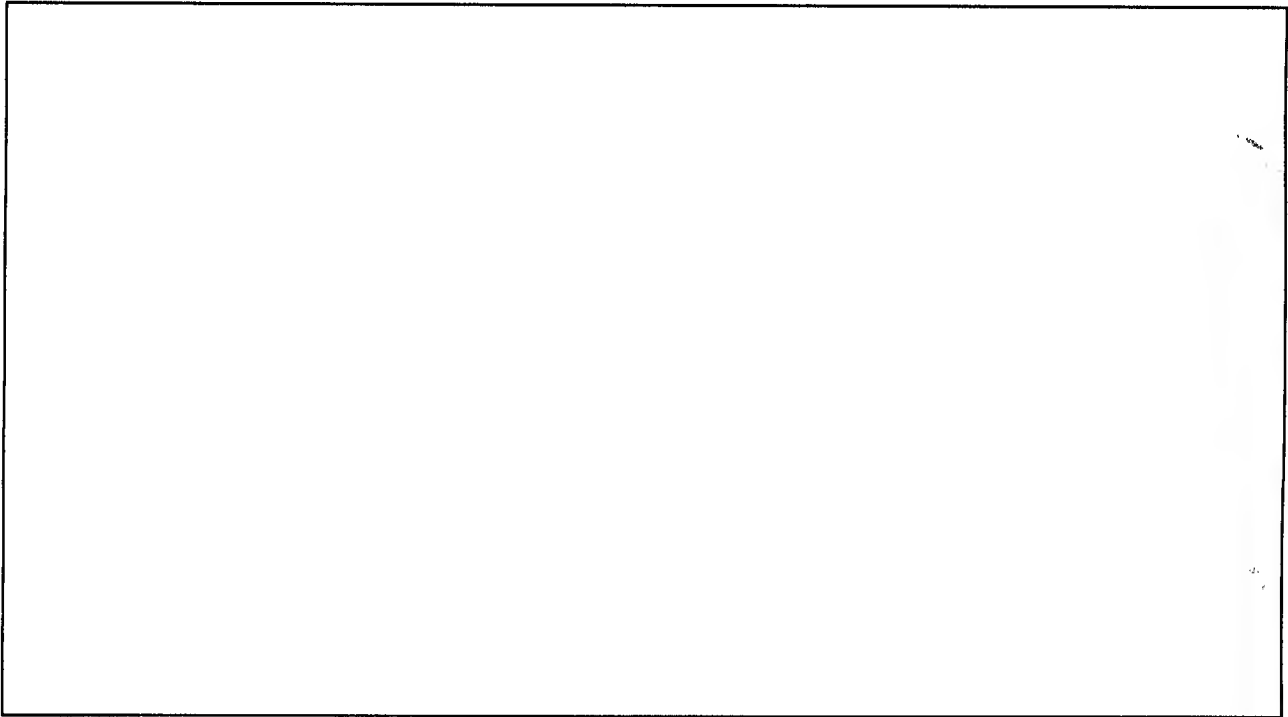
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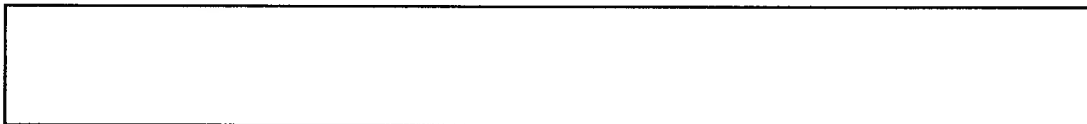




3. Production of Intelligence

Mr. Duckett has maintained a close overview of all intelligence production, receiving a copy of every report produced by the Directorate. The quantity of production has been fairly constant over the years, up a little in some years and down in others. Fiscal Year 1969 was high, but the following year there was a drop, one factor being the heavy contribution in analyst time and effort devoted to preparation for and participation in the Strategic Arms Limitation Talks.

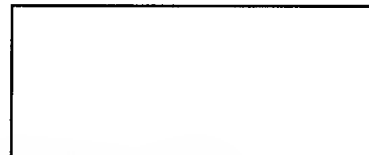
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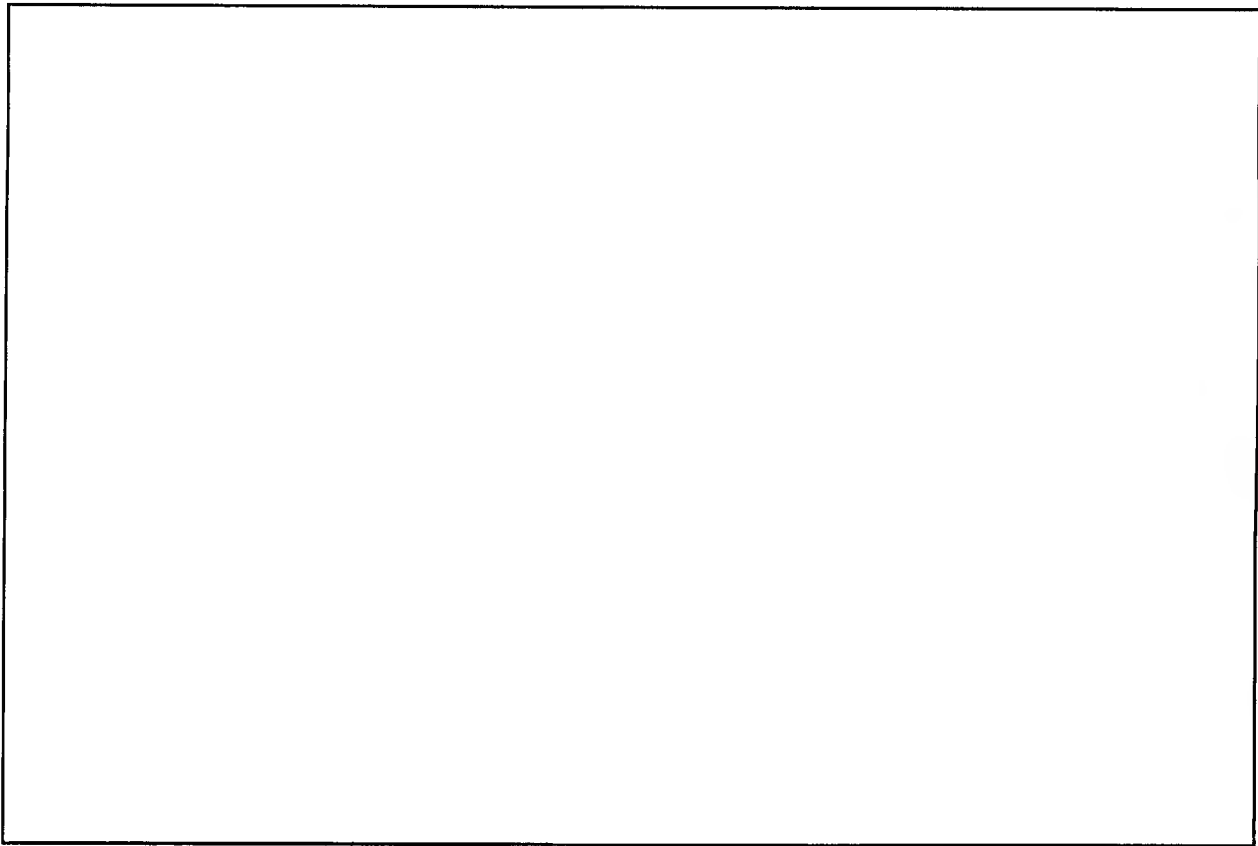
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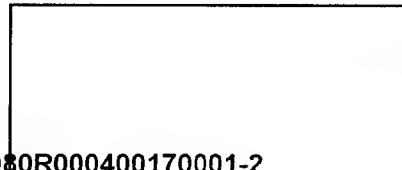
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In June 1967, OSI formed a new "Future Threats Branch" in the Physical Sciences and Engineering Division to fill the need in the Intelligence Community for attaining as much lead time as possible in identification of future Communist military threat systems and improving long-range planning for S&T intelligence collection. Initially the Branch spent its efforts largely in the evaluation of forecasting methods; it has since concentrated its attention on a computer-supported deductive methodology under an external research contract.

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The specialized publications of OSI and FMSAC continued to be produced through the 1967-70 period and contributions to the National Estimates averaged between 15 and 20 per year. Section 7 (Scientific) and 45 (Health and Sanitation) of the National Intelligence Surveys were produced by OSI and contributions to Sections 62-63 (Fuel and Power, and Minerals and Metals) were made annually. At the end of 1968, responsibility for preparation of Section 45 of the Surveys was transferred to DIA, due to OSI's manpower and funds limitations and the need to concentrate its assets on more urgent S&T developments in the USSR and China.

4. External Relations

a. Intelligence Community

In the opinion of Colonel White, Executive Director of CIA until his retirement in February 1972, a noticeable improvement occurred in the S&T Directorate's community relationships after Mr. Duckett became Deputy Director. Colonel White felt this was largely due to the fact that Mr. Duckett was a "team player" as opposed to Dr. Wheelon's more individualistic style of operation, and therefore Mr. Duckett was more acceptable to the community and had better rapport, particularly with the Pentagon.

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Mr. Duckett has relied on the Assistant DD/S&T and the CIA-appointed Deputy Director of NRO (since 1969 Dr. F. Robert Naka), for the Directorate's day-to-day participation in the NRP, but maintains complete and current knowledge of those matters in order to be able to make any decisions devolving upon him. When Mr. Helms confirmed Mr. Duckett as DD/S&T, he said that, as DCI, he did not intend to go through another "war" with NRO, and would look to Mr. Duckett to solve all his problems with Dr. Flax, the Director of NRO.

While all NRP decisions since Mr. Duckett's assumption of responsibility for CIA's role in overhead reconnaissance have not been uniformly satisfactory to CIA (e.g., the cancellation of the Agency's A-12 reconnaissance system in favor of the Air Force SR-71 in 1968), there has been a calmer air in the settling of differences and the CIA position has been on a firmer base. Mr. Helms, as a member of the NRP ExCom, has played a stronger part with increasing appreciation of the contributions of technical collection to his mission as head of the Intelligence Community. In the early days of the overhead reconnaissance program, he had considered those exotic activities as an offshoot from the Agency's normal field of operations, but by 1970 he was able

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to agree with Mr. Duckett that those activities for which  
the Agency had spent  of NRP funds between  
FY 1963 and 1970 could truly be regarded as CIA business.

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The DD/S&T's relationship with the White House Science Adviser, begun during Dr. Wheelon's tenure, was continued by Mr. Duckett. He met with Dr. Hornig up to the change of Administration at the end of 1968. During the time Dr. DuBridge served as Science Adviser (8 February 1969 to 20 August 1970), the regular meetings lapsed and instead there were occasional briefings and discussions as situations arose that required them. Since August 1970 when Dr. Edward E. David, Jr., succeeded Dr. DuBridge, there have been instituted regular monthly meetings at which Mr. Duckett or Dr. Steininger bring the Science Adviser up to date on new developments and on substantive intelligence. This relationship has continued to be beneficial to both sides.

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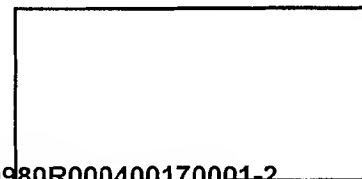
5. Support to Policymakers

Since Mr. Helms, prior to being appointed Director of Central Intelligence, had spent the greater part of his career in "classical intelligence" work within the Clandestine Services, Mr. Duckett felt that he would need to lean heavily upon the DD/S&T for briefings on priority national security matters such as the Soviet ABM system, which currently was in the forefront of national consideration. Not having a broad scientific background, the Director would naturally be a bit uncomfortable in technical discussions of such matters as missiles, space, and nuclear energy.

Mr. Duckett therefore made it his highest personal priority to keep himself completely informed on all S&T matters in the Directorate, in the Agency, and in the Community, in order to be prepared to give the Director the support he might need. The capability for technical back-up in support of the Director, buttressed in turn by the expertise of the entire Directorate, has benefited both parties. Because of the ascendancy of science and technology in relation to intelligence and

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national security, Mr. Duckett has become the most widely used of the Deputy Directors in supporting the DCI at Congressional Committee and budget hearings, NRP Executive Committee meetings, and other such forums in which matters critical to the Agency's and the Directorate's programs are discussed. The Director has developed confidence in Mr. Duckett's ability to give clear expositions on technical subjects and to give answers which take into consideration the thinking of the entire organization. In addition to supporting the DCI at such meetings, Mr. Duckett has been entrusted by the Director to carry out some missions on his behalf for the purpose of briefing and enlisting support of individual Senators and other government figures.

When Mr. Helms made the presentation of the Intelligence Medal to Dr. Wheelon on his departure from the Agency in September 1966, after he had extolled the brilliance and accomplishments of the first DD/S&T he gave a sly dig at Dr. Wheelon's propensity for erudite technological exposition by adding at the end of his speech: "And when he wanted to, he could make technical subjects understandable to non-technical people."

This remark gives a little insight into the reasons for the Director's more cordial attitude in recent

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years toward the DD/S&T. It might be said that Mr. Duckett has a facility for making technical subjects understandable to non-technical people most of the time, which doubtless has given the Director a better background for dealing with these subjects. In the current world situation, the DCI must rely heavily on science and technology, and the Agency's reconnaissance capability is very important to him. In Mr. Duckett's opinion the Director has come to rely upon the Directorate for Science and Technology as an organization capable of presenting consistently well-thought-out and defensible opinions.

Other personal priorities of Mr. Duckett have been ad hoc and sometimes unpredictable as to the amount of his time which would be monopolized. For example, he was appointed by the DCI to represent the Agency in the preparatory sessions for the Strategic Arms Limitation Talks in mid-1969, and during the balance of that year and the next he spent nearly half of his working hours in support of the SALT Working Group and its Verification Panel.

Another priority which arose in May 1969 related to the National Estimates with regard to Soviet offensive and defensive weapons. The White House

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(specifically Dr. Kissinger) felt that Soviet weapons were possibly being underestimated. A round of meetings ensued with Dr. Kissinger in which an exhaustive review was held. Mr. Duckett was heavily involved in this review and in the subsequent effort to retrieve credibility for the Estimates at the White House level.

The dissatisfaction of Dr. Kissinger, as well as of the President, in relation to the crucial estimates on Soviet offensive and defensive weapons, was that they were so watered down, in order to make it possible for all concerned to agree to their publication, that they were of little help, in the final analysis, to the policymakers.

Mr. Duckett and the DD/I, Mr. R. J. Smith, together with their advisers, worked out a new plan for writing Estimates which would give the policymakers more of a feeling for how much disagreement there was in the Intelligence Community and on what points; also, the plan gave the producing officers a greater role in the writing of the Estimates. The DCI was asked for approval, which he gave, and the 1970 Estimates for Communist offensive and defensive weapons systems followed the new plan. This made for longer and more detailed Estimates, which did

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not please everyone (particularly the Pentagon). The President and Mr. Kissinger, however, expressed their satisfaction with the new form of Estimate which they considered to be more helpful, from the policymaker's point of view, in establishing national security policy.

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